

Economic and Revenue Forecast

Fiscal Year 2010
Fourth Quarter

June 2010



WASHINGTON STATE DEPARTMENT OF
Natural Resources
Peter Goldmark - Commissioner of Public Lands

Caring for
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Acknowledgements

The Washington State Department of Natural Resources' (DNR) *Economic and Revenue Forecast* is a collaborative effort. It is the product of information provided by private individuals and organizations, as well as DNR staff. Without their contributions, the quality of the Forecast would be greatly diminished.

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Acronyms and abbreviations

Bbf	Billion Board Feet
CDN\$	Canadian dollar
CPI	Consumer Price Index
Cwt	Hundred pounds
CY	Calendar Year
DNR	Washington State Department of Natural Resources
FDA	Forest Development Account
Fed	U.S. Federal Reserve Board
FOMC	Federal Open Market Committee
FY	Fiscal Year
GDP	Gross Domestic Product
IMF	International Monetary Fund
ISM	Institute for Supply Management
mbf	Thousand board feet
mmbf	Million board feet
NAFTA	North American Free Trade Agreement
OPEC	Organization of Petroleum Exporting Nations
PPI	Producer Price Index
RCW	Revised Code of Washington
REIT	Real-Estate Investment Trust
RISI	Resource Information Systems, Inc.
RMB	Renminbi, China currency – the basic unit is the yuan
RMCA	Resource Management Cost Account
SAAR	Seasonally Adjusted Annual Rate
TIMO	Timberland Investment Management Organization
US\$	U.S. dollar
WWPA	Western Wood Products Association
WTO	World Trade Organization
Y	Japanese yen



Preface

This *Economic and Revenue Forecast* projects revenues from Washington State trust lands managed by the Washington State Department of Natural Resources (DNR). These revenues are distributed to management funds and beneficiaries as directed by statute. The Forecast information is organized by source, fund, and fiscal year.

DNR revises its Forecast quarterly to provide updated information for trust beneficiaries and department budgeting purposes. (See the Forecast Calendar at the end of this section for release dates.) We strive to produce the most accurate and objective forecast possible, based on the current policy direction and available information. Actual revenues will depend on DNR's future policy decisions and changes in market conditions beyond our control.

This Forecast covers fiscal years 2010 through 2015. Fiscal years for Washington State government begin on July 1 and end on June 30. For example, the current fiscal year, FY 2010, runs from July 1, 2009 through June 30, 2010.

The baseline date (the point that designates the transition from "actuals" to forecast) for this Forecast is March 31, 2010, the end of the third quarter of FY 2010. The forecast beyond that date is based on the most up-to-date market and economic information available at the time of publication, including DNR's timber sales results through May 2010.

Unless otherwise indicated, values are expressed in nominal terms without adjustment for inflation. Therefore, interpreting trends in the Forecast requires attention to separate inflationary changes in the value of money over time from changes attributable to other economic influences.

Each DNR Forecast builds on the previous one, emphasizing ongoing changes. Before preparing each Forecast, international and national macroeconomic conditions and the demand and supply for forest products are re-evaluated. The impact on projected revenues from DNR-managed trust lands is then evaluated, given the current economic conditions and outlook.

DNR Forecasts provide information that is used in the *Washington Economic and Revenue Forecast* issued by the Washington State Economic and Revenue Forecast Council. The release dates for DNR's Forecasts are determined by the state's Forecast schedule as prescribed by RCW 82.33.020. The table below shows the anticipated schedule for DNR's future *Economic and Revenue Forecasts*.

Economic Forecast Calendar

Forecast Title	Baseline Date	Draft Revenue Data Release Date	Final Data and Publication Date (approximately)
September 2010	End Q4, FY 2010	Sept. 10, 2010	Sept. 30, 2010
November 2010	End Q1, FY 2011	Nov. 6, 2010	Nov. 30, 2010
March 2011	End Q2, FY 2011	Mar. 4, 2011	Mar. 31, 2011
June 2011	End Q3, FY 2011	June 8, 2011	June 30, 2011



Introduction and Forecast Highlights

Employment. The current U.S. economy is being described as being in a “jobless recovery”. Though the nation's output is growing, jobs are still scarce; nearly eight million jobs have been lost and unemployment stands at just under 10 percent. We expect the economy to recover but the return to full employment levels will take years.

Housing Markets. Recent news on housing markets has been mixed at best. Sales of existing and new homes remain at low levels and existing home prices have started to slide again. The end of the income tax credit on home purchases is also resulting in fewer home sales. During the recession, household formation reversed resulting in some two million fewer households than there would be now had employment grown at normal rates. As a result, vacancy rates are high in both multi-family and single family homes despite record low construction levels of new homes. Because of this continuing oversupply of existing homes we don't expect new home construction to recover significantly this year and only modestly over the next year or two.

Lumber Prices. From January through April of this year, lumber prices increased dramatically but (unfortunately) only temporarily, as increased seasonal demand at the beginning of the building season coupled with extremely low inventories from the mills' log yards to the wholesale level for wood products combined to create a short-term scarcity of lumber and panel products. Lumber prices peaked in April with West Coast Composite (Coast Dry Random and Stud) averaging \$325/mbf, up 40 percent from January and up almost 90 percent from a year earlier. But since late April, lumber prices have been on a downward slide with futures prices leading the way downward from \$325/mbf to \$206/mbf, a 37 percent fall as of this report; there is no sign lumber prices are leveling off.

In response to lower lumber prices, mills have already begun announcing temporary closures as lumber supply has caught up with, and perhaps surpassed, demand.

DNR Stumpage Prices. When we did the February Forecast, our composite stumpage price had increased to \$225/mbf. In the three months ending in April it increased an additional 27 percent to \$285/mbf, but in May it was unchanged.

With only one month to go in FY 2010; we now forecast DNR stumpage prices to average \$249/mbf for the full year—up \$34/mbf (or 16 percent) from the February Forecast, but significantly lower than the recent peak price.

Lumber prices have fallen to the point that they are now putting downward pressure on log and stumpage prices. Given the current downward pressure from lumber prices, we now expect

stumpage prices to average \$210/mbf for FY 2011, down \$29/mbf from FY2010 but up \$25/mbf from the forecast in February.

As mentioned above, we have become increasingly pessimistic about the long-term recovery of housing, and therefore predict lower demand for forest products and lower DNR timber stumpage prices long term. We now are forecasting that stumpage prices for next biennium will average \$230/mbf, that's about equal to this biennium, but down about \$25/mbf or 10 percent from what we forecast in February.

Timber Sales Volume. There are only minor changes to DNR's planned timber sales level, with 7 mmbf worth of timber sales volume being shifted forward from FY 2011 to FY 2010.

Forecast Removal Volume and Removal Prices. Based on our latest timber purchasers survey (conducted in early May), DNR timber sales purchasers have accelerated their planned harvest from the volume under contract into FY 2010 to take advantage of current higher prices. Forecast removals for the current biennium are up by 58 mmbf or 4 percent over that forecast in February, while the forecast removals over the next two biennia are down by 48 mmbf.

Because of the increase in forecast sales prices described above, forecast removal prices during the current biennium are up by \$19/mbf, or 8 percent and up by \$3/mbf, or 2 percent for next biennium.

Bottom Line for Timber Revenues. As a result of the increase in forecast removal volume and prices, forecast timber revenues are up by \$39.0 million, or 14 percent, this biennium and down \$5.3 million, or 2 percent, next biennium from the February Forecast.

Lease and Other Non-timber Revenues. Since the February Forecast, the department held two extremely successful geoduck auctions, both with average prices over \$10.50/lb., twice the forecast level. Geoduck prices are notoriously volatile; still, prices have remained around \$10/lb. for the last year. Based on current market strength and the expected strength of China's economy (the main market for geoducks), we have increased our forecast prices from \$4.50/lb. to \$5.75/lb. Based on the year-to-date sales and the higher forecast prices going forward, forecast aquatic revenues are up by \$9.0 million for the current biennium and up \$5.0 million for the next biennium from that forecast in February. There were only minor changes in other aquatic and upland lease revenues.

Caveats. The run up in lumber prices and corresponding log and stumpage prices was a welcome, if temporary, event that is still playing out. Given the extremely low level of housing starts, low demand for forest products, and excess lumber capacity, we expect that lumber prices will continue their downward path and therefore push log and stumpage prices down.

Stumpage prices could be pushed even lower than we currently forecast or not as much. At this point we judge the upside and downside risks to the forecast to be balanced.



Part 1. Macroeconomic Conditions

The reality is that we didn't understand the economy as well as we thought we did. Central bankers, along with other policymakers, professional economists and the private sector failed to foresee or prevent a financial crisis that resulted in very serious unemployment and loss of wealth around the world. We must learn from our experience.

*Federal Reserve Vice Chairman Donald L. Kohn
March 24, 2010*

This section briefly reviews current and predicted conditions of the U.S. and world economies because these macroeconomic conditions affect the stumpage bid prices for Washington State Department of Natural Resources (DNR) timber sales.

Construction activity—particularly new housing, repairs, and remodeling—accounts for most of the consumption of finished wood products in the United States. As a result, factors that affect the U.S. construction sector influence DNR's revenues and revenue forecasts. The residential housing sector looks especially bleak at the present time. The pendulum has moved back strongly in reaction to the extreme swing it took at the height of the U.S. real estate bubble, which led to the collapse of the financial system and threw the world into economic crisis.

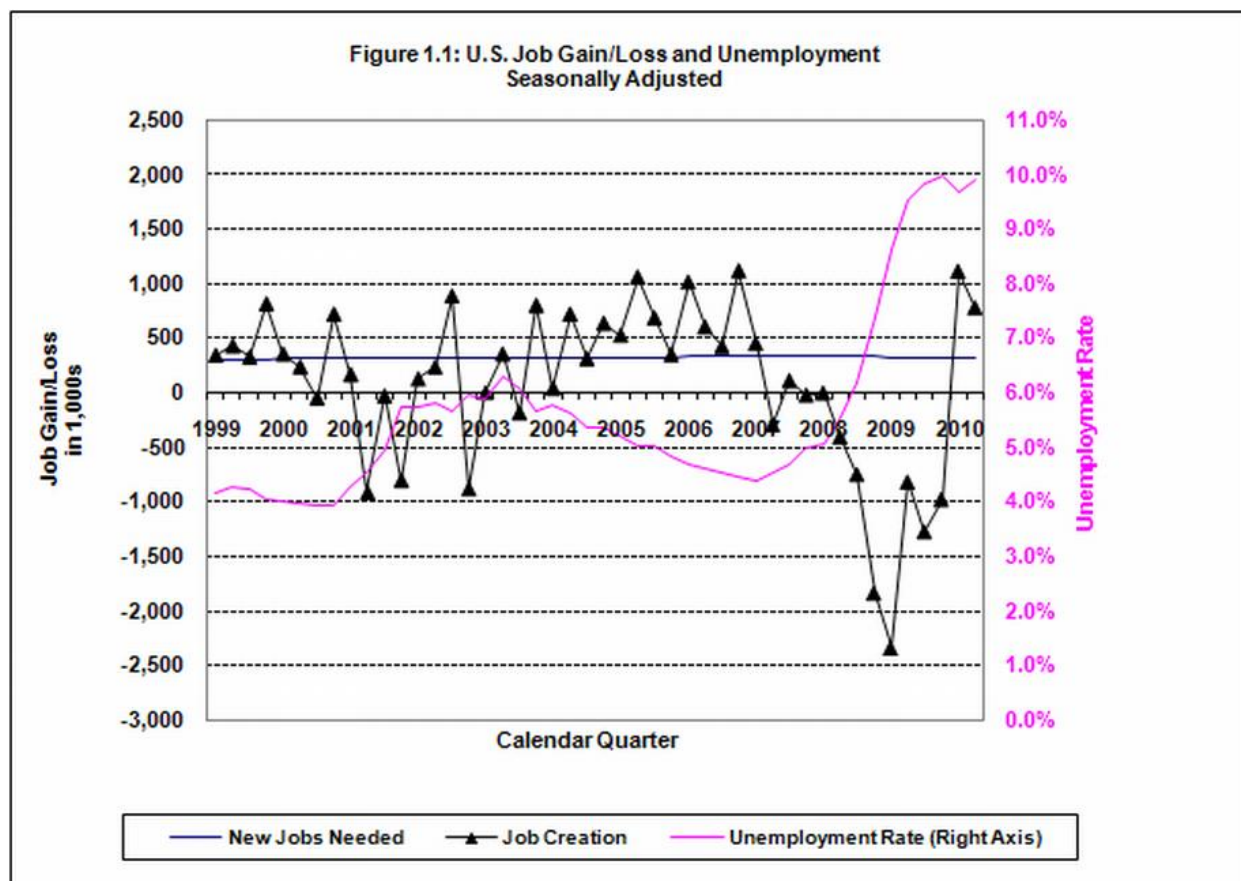
Prospects for the U.S. economy going forward, at least in the remainder of 2010, are uncertain and there is a significant downside potential. The recent economic reports are contradictory and volatile. Employment and personal consumption reports suggest continued stagnation while manufacturing output reports are more positive.

International supply and demand also affect domestic timber stumpage prices and lumber prices. On the supply side, Canada has a strong influence on the U.S. wood products sectors as it is a major source of lumber which can enter U.S. markets quite readily. On the demand side, China is becoming an increasingly important market for world commodities.

U.S. economy

Employment. The current U.S. economy is being described as being in a “jobless recovery”. Though the nation's output is growing, jobs are still scarce; nearly eight million jobs have been lost as a result of the worst financial crisis since the Great Depression. Since January the private sector has created about 480,000 jobs. This is good news. But at that rate, the economy won't return to its pre-recession employment level of about 115.6 million jobs until about 2016 let alone create jobs for all the people who would normally be added to the labor force over the next six years.

Nearly 15 million unemployed workers continue to look for work and the U.S. unemployment rate is at a high 9.7 percent (see **Figure 1.1**). The consensus of economists is that unemployment will remain high—near the 10 percent level—for the next couple of years at least. This of course will reduce the rebound in consumer confidence and consumer spending, which will in turn be a drag on economic recovery.



What really makes the current economic slowdown stand out is the number of people (and percentage) that have been unemployed for over a half of a year (26 weeks). For the 40 years up to 2009, the number of people unemployed 27 weeks or more peaked at 2.6 percent of the civilian labor force (once in 1983 and then again in early 2009). In May 2010, there were a

record 6.763 million people unemployed for 27 weeks or more, or a record 4.4 percent of the labor force. This is strikingly higher than during earlier periods.

It does appear that the number of long-term unemployed is near a peak (the increases have slowed). But it is still very difficult for these people to find a job and even more so as they have lost skills and self confidence during the long period without work and an income.

Compounding the problem, state and local governments under severe financial stress are eliminating such items as child care programs, which have enabled single parents to be in the labor force, and job training programs which help the long-term unemployed learn new skills to reenter the labor force.

Inflation. Inflation is a rise in the general level of prices of goods and services in an economy over a period of time. When the price level rises, each unit of currency buys fewer goods and services; consequently, annual inflation is also an erosion in the purchasing power of money. A chief measure of inflation is the annualized percentage change in general consumer prices (normally the Consumer Price Index) over time.

Inflation usually is not an issue during recessionary periods and the current recession¹ is not an exception. In December 2008, the U.S. inflation rate (on a 12-month basis) approached zero (see the consumer price index (CPI) plotted in orange on **Figure 2.1**). March through October 2009 was actually a deflationary period as prices fell while the economy stagnated. The CPI has been rising again since November 2009 and most recently was at 2.3 percent in March 2010.

According to a recent statement by the Federal Reserve Bank (Fed), prices of energy and other commodities have declined somewhat in recent months, and underlying inflation has trended lower. Its expectation is that inflation is likely to be subdued and stable for some time.

Interest Rates. The Fed continues to maintain the target range for the federal funds rate at a historically low 0 to ¼ percent. In a recent statement, the Fed said it “continues to anticipate that economic conditions, including low rates of resource utilization, subdued inflation trends, and stable inflation expectations, are likely to warrant exceptionally low levels of the federal funds rate for an extended period.” As long as the U.S. economic recovery remains weak, the Fed will not want to raise interest rates and cut off the recovery before it has gained a strong foothold.

Home mortgage rates are currently also at historic lows. The average rate of a 30-year fixed rate mortgage is now below 5.0 percent. Fifteen-year fixed rate mortgages can be found at rates under 4.0 percent.

¹ As of this writing it appears that the U.S. is coming out of the “Great Recession”, the largest national economic crisis since the Great Depression. The Business Cycle Dating Committee of the National Bureau of Economic Research sets the official start and end dates of U.S. recessions. It has established the official start date as December 2007, but to date it has declined to set the end date. Most economists think the recession ended in mid to late 2009 and the economy is now in recovery. Other economists are not so sure because key economic indicators are weak and wavering. There is debate whether a further downturn would constitute a “double dip” recession or a new recession. Throughout this Forecast, terms such as “current recession” and “current recessionary period” are meant to generally refer to the extraordinary economic period we have been in for the last several years without being technical about the recession’s end date. This is consistent with the fact that an end to the recession does not mean that the economy is recovered only that it has stopped declining.

One problem dampening the recovery is that, even with the exceptionally low interest rates, bank lending activity is way down and has continued to contract in recent months.

U.S. Consumption. Consumption is the total final purchase of goods and services by individuals in an economy. Most simply, it is a function of aggregate disposable income, being that part of personal income that is not set aside as savings.

U.S. real personal income (less transfer payments) has shown a consistent pattern of regular growth over the last forty years except for in the several recessionary periods when it has been either flat or slightly decreasing. During 2008 and 2009, personal income declined much more steeply and over a much longer time period than any other time in the last forty years. Since consumption is a function of income, it is no surprise that household consumption fell off in the U.S. economy during the last two calendar years.

Not only has personal income and consumption shrunk during this recession, but so has personal wealth, as the asset value of individual's homes and investments have declined. There are signs that during this recessionary period, people may be becoming more conservative with their spending, paying down their debt, and increasing savings. It remains to be seen whether they will continue to rein in their spending habits over a longer period when the economy recovers.

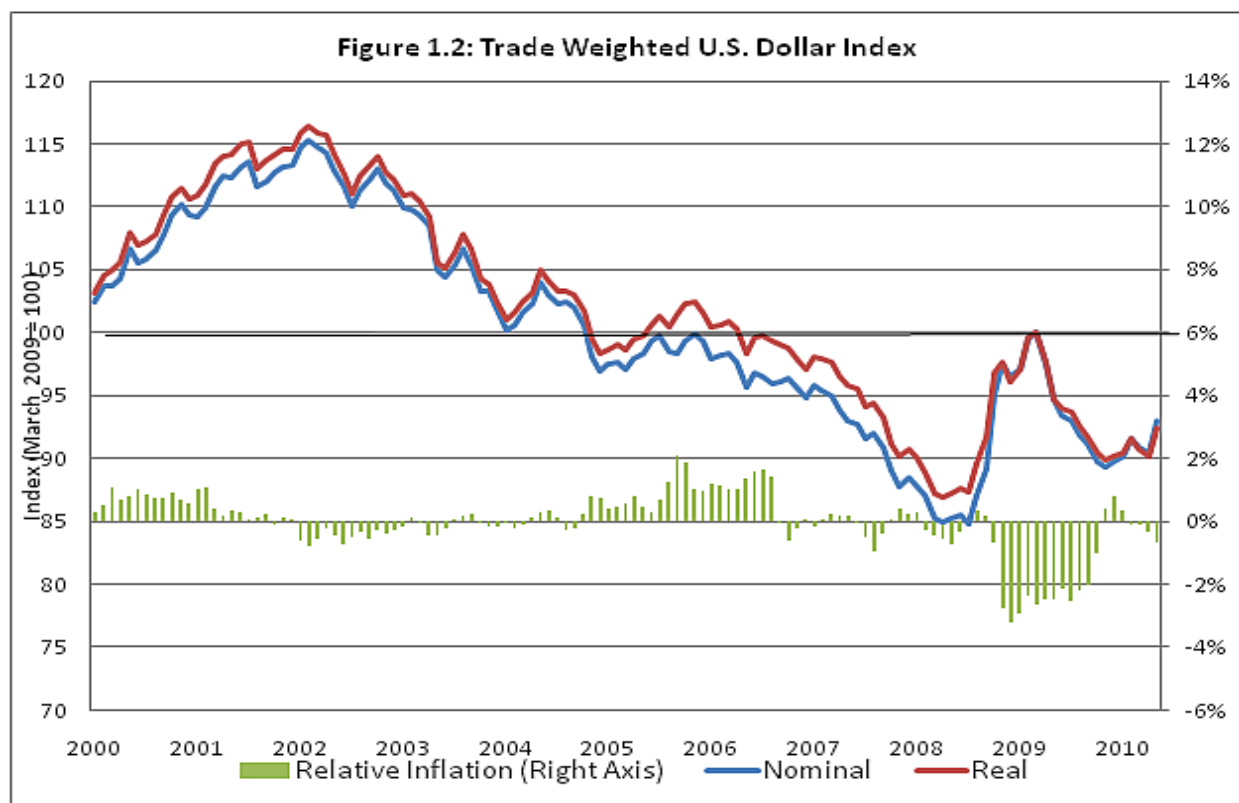
Consumer spending finally turned up again in late 2009 and continues up in 2010 through April, perhaps an indication of pent-up demand. However, household spending remains constrained by high unemployment, modest income growth, lower housing wealth, and tight credit.

Trade and the U.S. Dollar. Figure 1.2 shows the trade-weighted U.S. dollar index for this decade. The broad index is a weighted average of the foreign exchange values of the U.S. dollar against the currencies of a large group of major U.S. trading partners. The chart shows that the dollar was at its strongest (relative to other world currencies) in early 2002. Going back to 1973, the only other time the U.S. dollar peaked at a higher point was in early 1988, when it was 13 percent higher in real terms than in early 2002. Since 2002, the dollar has been on a long depreciating trend.

The relative value of the dollar rose sharply during 2008 as the financial crisis went global and the U.S. dollar was seen as a safer haven for investors looking out on a bleak global financial landscape. The dollar then fell through most of 2009 but has turned up somewhat since November as uncertainty has once again increased.

Most economists expect the dollar to fall over the next several years as the economies of our trading partners grow faster than the U.S. economy. In a much anticipated move, China has recently allowed its currency to begin to float more freely against the U.S. dollar and this revaluation of the yuan will likely cause the dollar to fall even further.

Figure 1.3 shows the relationship between the real U.S. dollar and the U.S. trade deficit shown as a percentage of U.S. exports. The trade deficit generally follows the dollar but with a considerable lag. For example, the dollar peaked in early 2002 but the trade deficit peaked about four years later in 2006 at almost 60 percent. The dollar reached a low in early 2008 and the

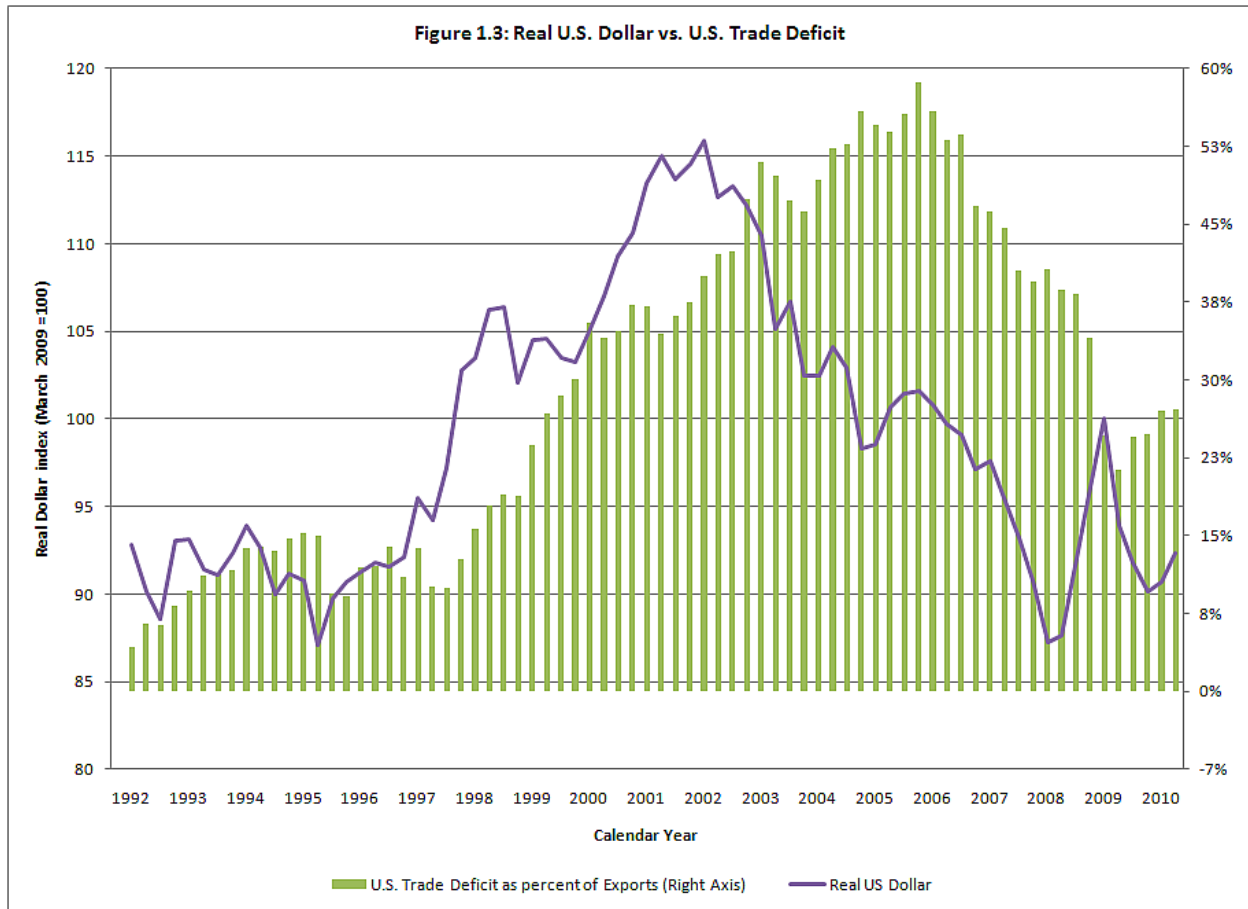


trade deficit fell to 23 percent of exports in early 2009. Both have been on the increase since those low points.

The narrowing gap in the trade deficit is due to the fact that U.S. exports have not fallen off as steeply as U.S. imports during the current recessionary period. In fact, some analysts are suggesting that exports to emerging markets may help lead the recovery this time. In April and May, U.S. exports continued to grow strongly (up 25 percent), driven by large increases in Latin America (up 42 percent) and Asia excluding Japan (up 40 percent).

Since we forecast the dollar will continue to fall over the forecast period, we expect the trade deficit to fall as well (with a lag). The major risk to this forecast is slow growth in the Eurozone economies. The euro could suffer because of financial problems in weaker members of the European Union. Even with all the problems in the U.S. economy, the dollar remains the economic haven in financial storms. So if Europe's financial problems get worse, the dollar would strengthen (relatively).

U.S. Gross Domestic Product (GDP). Real gross domestic product—the output of goods and services produced by labor and property in the U.S.—increased at an annual rate of 2.7 percent in the first quarter of 2010, down from a 5.6 percent increase in the fourth quarter of 2009. The deceleration in GDP growth primarily reflected a slowdown in inventory investment as businesses were finishing restocking their depleted shelves. Other factors in the decline were a deceleration in exports, a downturn in residential fixed investment, and a larger decrease in state and local government spending.



Economists are generally predicting a GDP growth rate of around 2.5 to 3.5 percent for calendar year 2010. Consumer spending has been expanding and manufacturing activity continues to rebound. Business purchases of equipment and software have been robust. However, others see a slowdown in the second half of 2010 due to factors such as less federal stimulus spending, the end of the inventory correction, slower growth in personal consumption expenditures, another downturn in housing, a slowdown in Europe and/or China, and continued cutbacks in state and local government spending.

Prospects for the U.S. economy going forward, at least in the remainder of 2010, are uncertain and there is a significant downside potential. The recent economic reports are contradictory. For example, the most recent employment, housing, retail sales, and rail traffic reports suggest a slowdown while the most recent manufacturing output and U.S. auto sales reports are positive. There have been three quarters of positive GDP growth and the outlook is for positive, but moderate, growth going forward. We think GDP growth will be more like 2 percent for the year.

The good news is, things are getting worse slower.

*Arun Raha, Executive Director, Washington State Economic and Revenue Forecast Council
June 18, 2010*

World economy

China is the emerging powerhouse in the world economy and will increasingly affect the U.S. economy as the world becomes increasingly interconnected financially and economically.

The cost of hiring Chinese workers who supply the world with inexpensive goods is climbing. But workers with a deeper pocket are good news for foreign companies that see them as customers.

*People's Daily Online
June 9, 2010*

In the last Forecast, we highlighted China as now the second largest economy in the world (after the U.S.) with an expected GDP growth rate of over 9 percent for CY 2010. China's robust and growing imports of raw materials are important to commodity-based economies like Canada and Australia and smaller less developed countries throughout the world. China's targeted government stimulus spending on public infrastructure helped it get through the global recession even better than it would have otherwise and the expenditures were an investment in the country's future. The recently opened Shanghai Expo 2010 looks to be a great success and serves to open China more to the outside. The strong economic signs in China are tempered by concerns about a real estate bubble, increasing inflation, and some signs of labor unrest.

India's 6 percent annual GDP growth rate is not as spectacular as China's 9.5 percent over the last two decades but it is impressive nevertheless. Most economists figure China and India possess the fundamentals to keep growing in the 7 to 8 percent range for decades given their young populations, high savings, and the sheer amount of catching up they still have to do. The World Bank forecasts India's economy will surge 7.6 percent in 2010 and 8 percent in 2011, not far behind the 9 percent rate it predicts for China for each of those years. The balance of power in many technologies will likely move from West to East, as China and India graduate a combined half a million engineers and scientists a year.

Since December, attention has turned to the Eurozone², specifically to Greece. As Greece was on the verge of defaulting on its international debt, the U.S. stock market became jittery and remains so today. After prolonged discussions, the European Union (led by Germany) and the International Monetary Fund came to the rescue with funding to prop up the Greek government budget. This comes with the requirement that Greece enter a period of austerity and reduce government spending, wages, and pensions. Social unrest and protest on the streets of Athens greeted the move.

Greece accounts for only 2.0 percent of the total GDP of European Union economies, so its troubles should not be that important on a world scale, especially since they have been addressed

² The "Eurozone" or "euro area" is an economic and monetary union of 16 European Union (EU) member states which have adopted the euro as their currency. Great Britain, Denmark, and Sweden are EU states which do not use the euro and are therefore not part of the Eurozone. Eight Eastern European countries which are EU states are obliged to join the Eurozone once they fulfill certain criteria.

at least for now. However, there are legitimate fears about a “contagion” of serious national debt problems to other larger Eurozone countries, namely Portugal, Spain, and Ireland. It remains to be seen how attempts to enforce austerity will play out economically, socially, and politically across the European landscape. The U.S. itself may not be immune as Fed Chairman Bernanke has now stated that federal government deficit spending is not sustainable. But it's important to note that he said Congress shouldn't cut spending now while the economy is so fragile, but rather it needs to show it is serious about the deficit and begin developing a plan to bring it down in the longer run.



Part 2. Log and Lumber Industry Factors

This chapter focuses on specific factors that affect the timber stumpage prices and overall timber sales revenues received by the Washington State Department of Natural Resources (DNR). Timber stumpage prices reflect demand for lumber and other wood products, timber supply, and regional and local milling capacity. The demand for lumber and wood products is directly related to the demand for housing and other end-use markets.

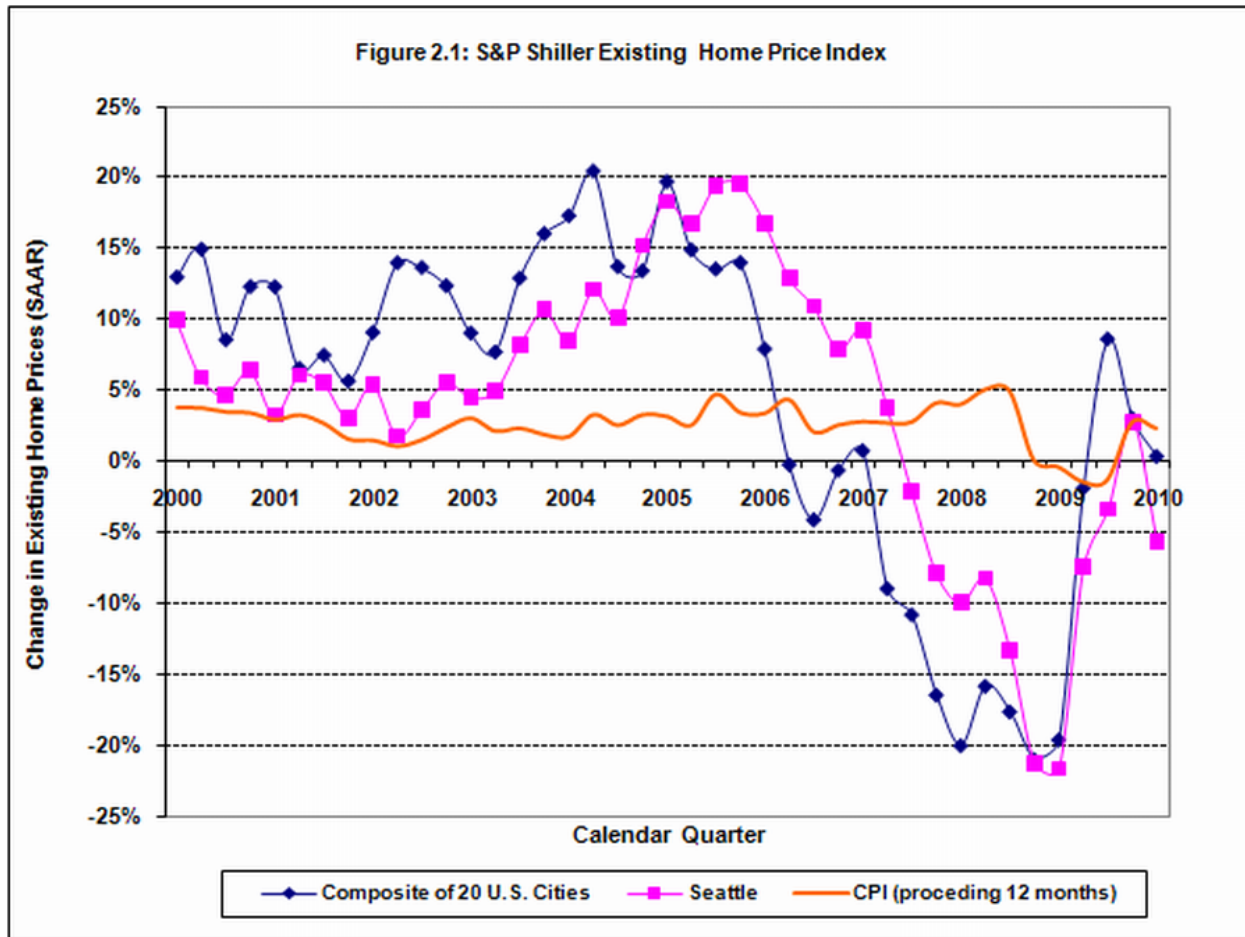
The short run outlook for the forest products industry continues to be rather pessimistic as the largest and longest recessionary period since the Great Depression persists with high unemployment and a depressed housing market. In the U.S. West Coast region, lumber mill closures and curtailments continue due to declining lumber market conditions.

U.S. housing market

Housing Prices. Going back to 1990, U.S. housing prices increased at an amazingly stable low rate for a prolonged period until spring 1997. Then prices appreciated gradually until about 2000 when they began growing at an accelerating rate into the real estate bubble period from late 2003 through 2005. As shown on **Figure 2.1**, housing prices were increasing at an annual rate (SAAR) of 13 to 20 percent each quarter during this period. Then the bubble burst with the collapse of the subprime mortgage industry and housing prices were declining by the second quarter of 2006. U.S. homes lost value over the next three years, losing 16 to 21 percent on an annual rate for the six worst quarters.

There has been a dramatic turnaround in trends over the last year, with house prices actually increasing again by mid-2009. However, this was apparently largely due to a now-expired federal tax credit for homebuyers. The rate of housing price increases has again turned downward and the composite housing price increase of the largest 20 U.S. cities was at near zero for the first quarter of 2010. Seattle home price changes have lagged behind the U.S. pattern in the current recession and are still falling.

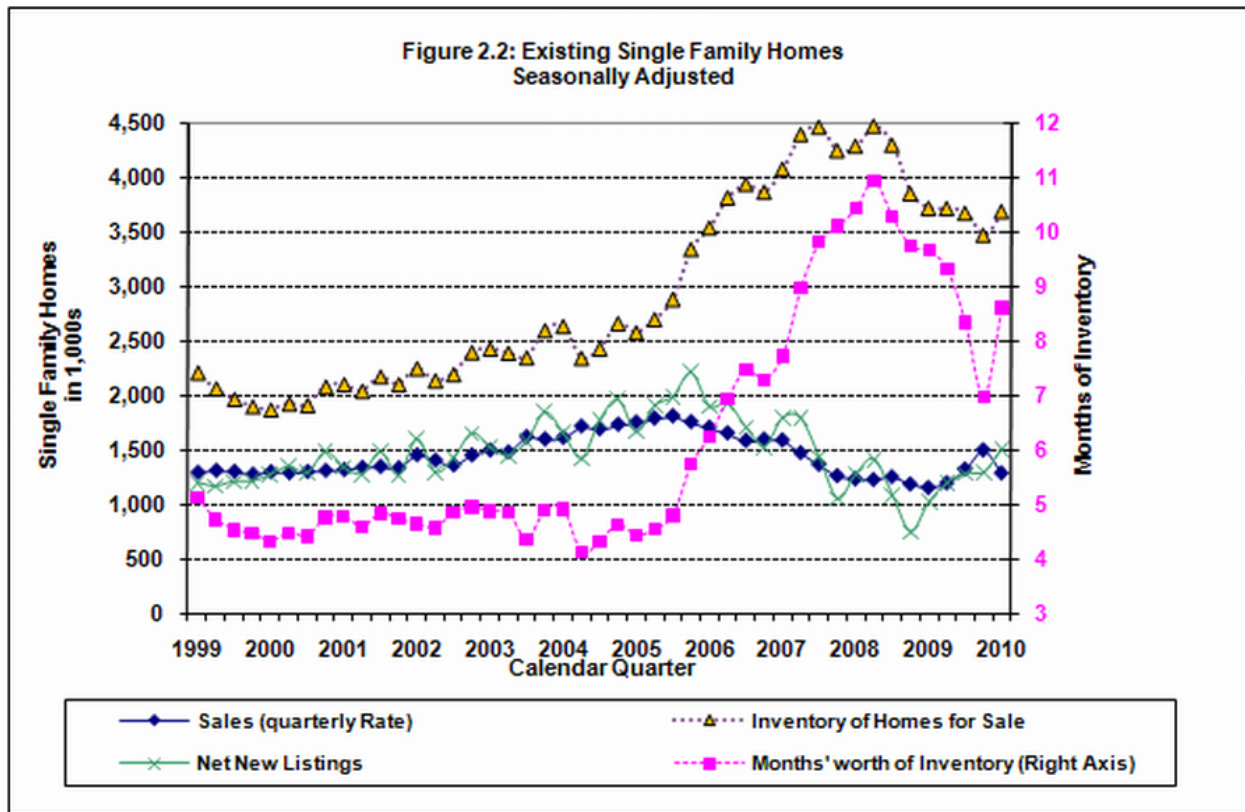
Looking forward, the outlook for higher existing home prices is bleak because of the unprecedented number of mortgage loan foreclosures. This places a huge inventory of housing units into the ownership of banks and other financial institutions, who will be motivated to dispose of them at whatever price they can get. First quarter 2010 data from RealtyTrac shows that sales in some form of foreclosure bring 27 percent less than normal home sales. This “shadow inventory” will continue to have a strong downward effect on housing prices for the next several years.



The abrupt fall in housing prices also puts more pressure on Americans who find their houses worth less than the amount of their mortgages (“negative equity”). This will lead to more foreclosures as people lose their jobs or are otherwise financially stressed. At best, many find themselves captive in their existing homes, reducing the very mobility that contributes to making the American economy so dynamic.

Existing Home Sales. After what looked like a recovery in the market for existing homes in 2009, things have gone sideways. As shown on **Figure 2.2**, sales of existing homes had moved up solidly throughout 2009 to almost 1.5 million (quarterly rate) in the 4th quarter. But the rate fell sharply to 1.285 million for 1Q 2010. The spike in sales of existing homes in the last quarter of last year is attributable to the December 31 expiration of the federal tax credit for homebuyers. The program was extended through April of this year and once again there was a surge in existing home sales in April (5.77 million SAAR, not graphed). Most likely May and June sales will suffer as normal activity has been moved forward to take advantage of the end-of-April tax credit deadline.

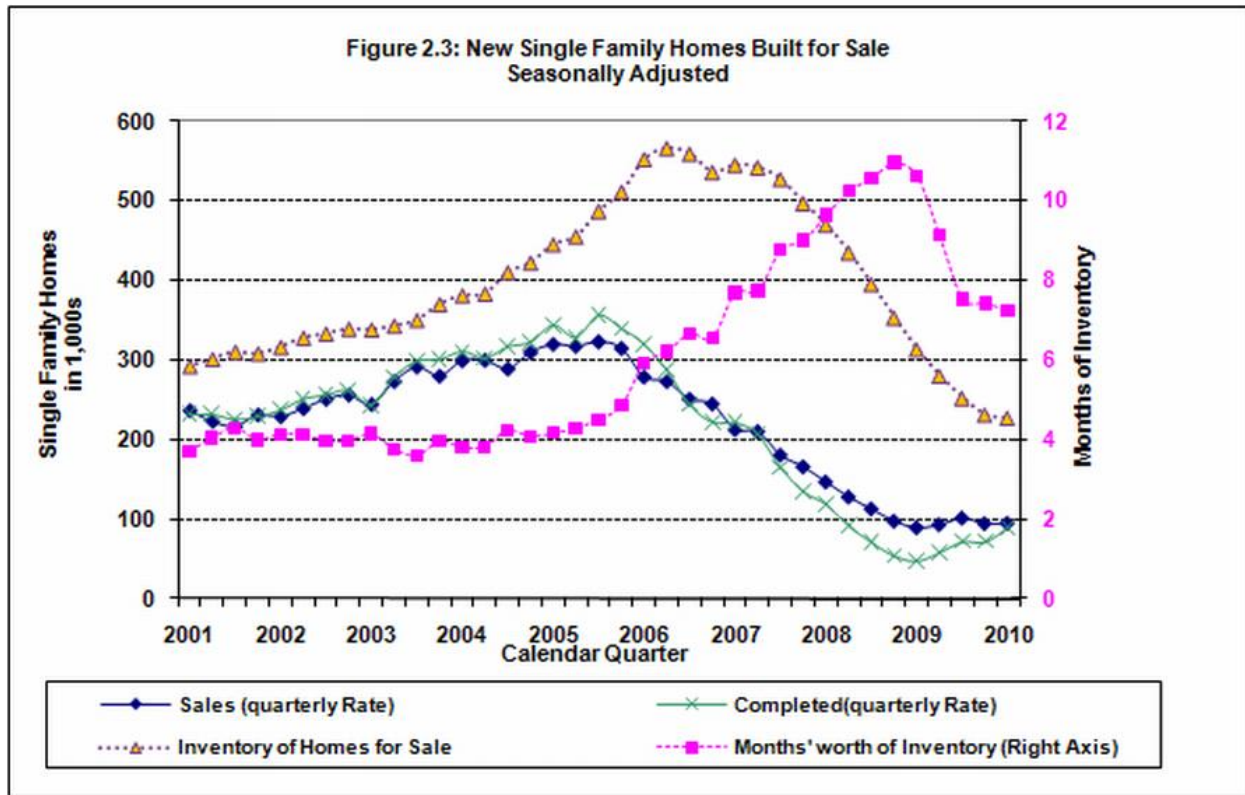
Figure 2.2 also shows the reversal in 1Q 2010 of the recently declining inventory in existing single family homes. The number of existing homes on the market was generally in the range of 2 million to 2.5 million from 1999 into 2005. When the U.S. real estate bubble burst, the number



of existing homes on the market climbed rapidly to 3.5 million by 2006 and then to 4.5 million in 2007. By mid-2008, the inventory had dropped below 4.0 million and it was down to just below 3.5 million homes in 4Q 2009. But inventory jumped back up in 1Q 2010 to 3.7 million, mirroring the turnaround and decline in sales of existing homes. Also contributing to the increased inventory was the fact that more houses were newly listed on the market than in the previous period, perhaps in response to the encouraging increase in existing home sales in 4Q 2009.

The months' worth of inventory of existing homes follows the pattern of number of existing homes on the market. From 1999 through 2005, there was consistently four to five months of inventory. After the market collapse, existing home inventory climbed to a peak of almost 11 months' worth in 2Q 2008. As sales of existing homes recovered, the inventory fell to seven months' worth in 4Q 2009, only to leap back up to 8.6 months in the first quarter of 2010 as sales fell back down.

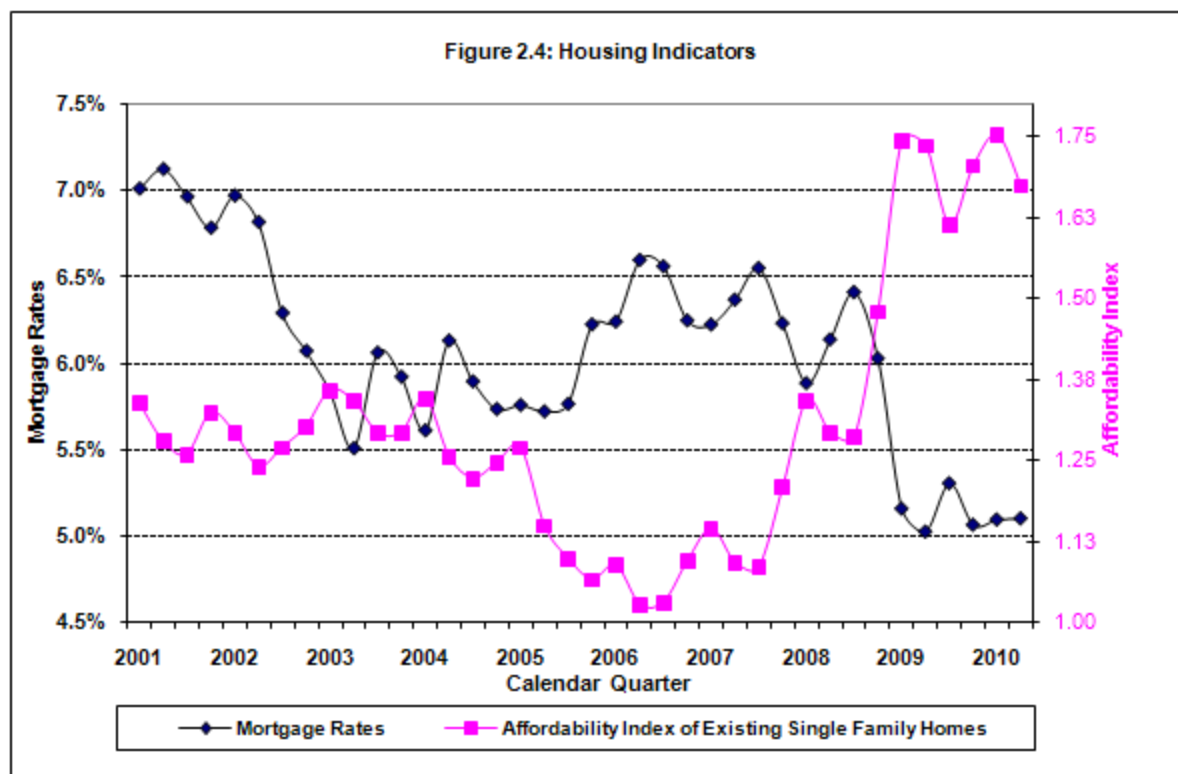
New Home Sales. Sales of new U.S. homes have fallen off much more dramatically than sales of existing homes during the current recession. From the peak in 3Q 2005 to the low point in 1Q 2009, sales of existing homes fell by 36 percent. In the same period, sales of new homes fell by a whopping 72 percent (compare rate of sales for existing homes and new homes on **Figures 2.2 and 2.3**). And unlike sales of existing homes, which turned up throughout 2009, sales of new homes have been flat through 2009 and into 2010.



The dramatic drop in new house construction has also served to bring down the inventory of newly built homes to the lowest level in 10 years. The amount of inventory has stabilized as new housing starts have picked up over the last year to match the level of sales, which have remained flat. However, the months of inventory is still high at 7.3 months compared to pre-bubble levels of just 4 months.

Affordability. U.S. mortgage loan rates have stayed down just above 5 percent for six quarters running (see **Figure 2.4**). The family income required to qualify for a mortgage on the \$173,400 median priced existing single family U.S. home at April's rate of 5.10 percent is only \$36,144 per year. This compares with an average qualifying income of \$36,048 in 2009, \$45,984 in 2008, and \$52,992 in 2007. Median family income was \$60,498 in April, compared with an average of \$61,845 in 2009, \$63,366 in 2008, and \$61,173 in 2007. At least for those families who have not lost jobs, houses have become more affordable over the last several years as housing prices and mortgage rates have fallen more rapidly than family income.

Housing Starts. The rate of new home construction has dropped to a level not seen in most Americans' lifetimes. Since the U.S. Census Bureau started keeping track in 1959, the average number of new housing units built in the U.S. was 1.534 million per year. This includes the unprecedented high rates around 2 million per year during the U.S. real estate overvaluation bubble from late 2003 into early 2006 (peaking at an annual rate of 2.273 million in January 2006). In 2009, only 554,000 new housing units were built. The rate has increased each

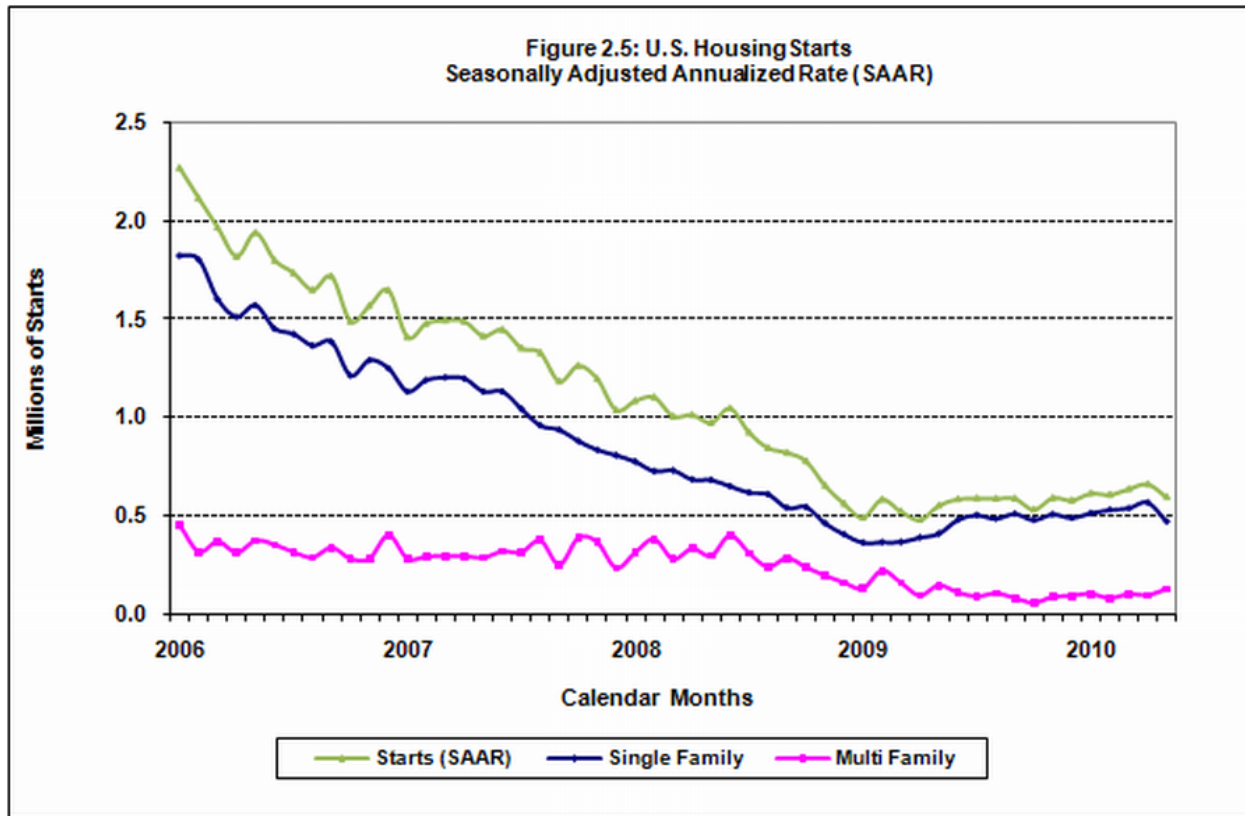


The **Affordability Index** is the ratio of median family income and the income required to qualify for the median-priced existing single-family home. In April 2010 the affordability index was \$60,498/\$36,048 or 1.674.

month for the last four months; however, it was still at a very low 672,000 annual rate in April. But that's an improvement over the record low point of 477,000 (SAAR) in April 2009. See **Figure 2.5** for detail.

Historically, about two-thirds of all housing starts are single family homes, so it is not surprising that single family housing starts are also in the same deep trough. There were only 442,000 new single-family homes built in 2009, compared with an average of 1.092 million per year for the previous 50 years. The rate for single family home construction has been increasing each month since December, but it is still at a depressed annual rate of 593,000. However, this is a big improvement over the bottom of 360,000 hit in January 2009.

While single family housing starts have been slowly picking up in the last 16 months, multifamily housing construction has flattened off to only 83,000 units (annual rate) over the last eight months (see **Figure 2.5** for detail). By comparison, an average number of 442,000 multifamily housing units were built in the United States every year over the last 50 years. So now multifamily housing construction is in even worse shape than the single-family sector.



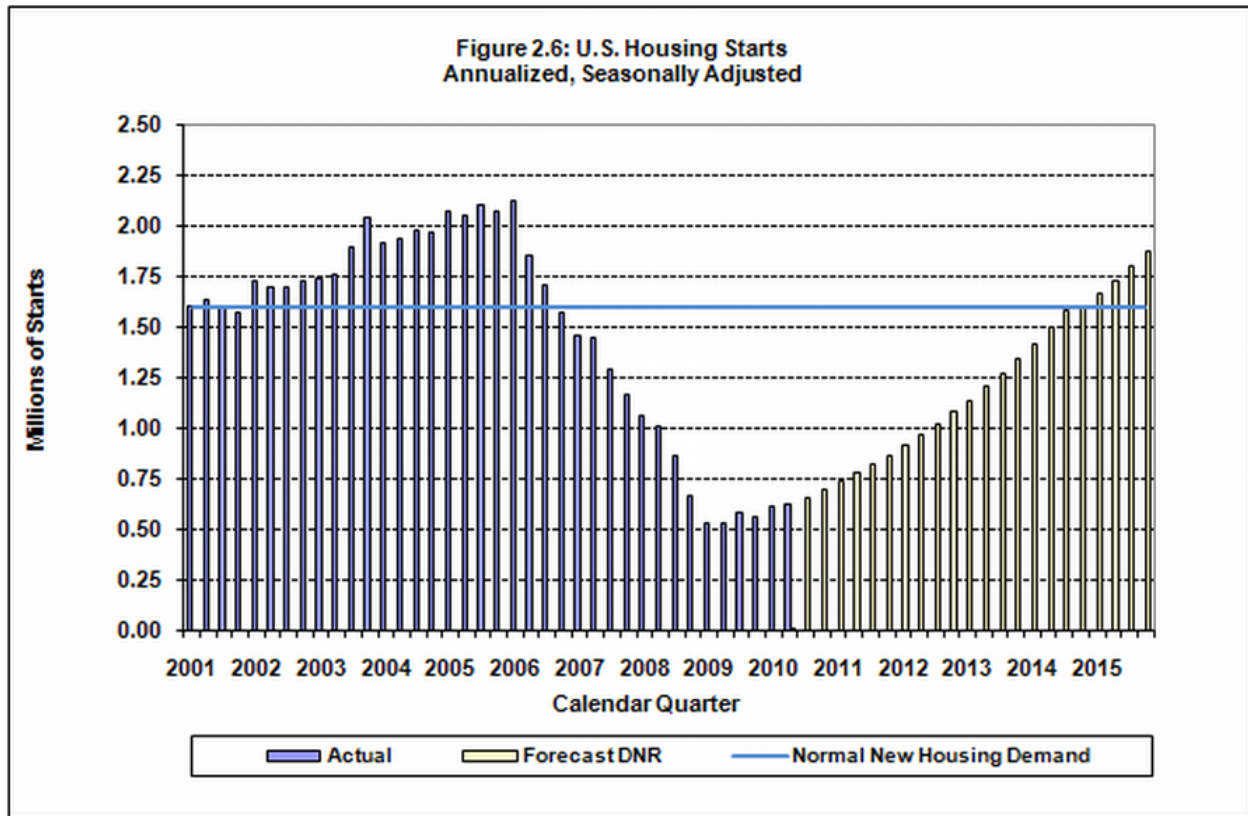
People thought it was good news a few years back when housing starts—the supply side of the picture—were running about two million annually. But household formations—the demand side—only amounted to about 1.2 million. After a few years of such imbalances, the country unsurprisingly ended up with far too many houses.

*Warren Buffet in his annual letter to shareholders
February 26, 2010*

Buffet goes on to state that the obvious way to cure this overhang, rather than blowing up a lot of houses (a tactic similar to the destruction of autos that occurred with the “cash-for-clunkers” program), is exactly what the market has done by reducing new housing starts to a number far below the rate of household formations.³ He says that until the U.S. works down the excess inventory of existing homes, prices will remain far below “bubble” levels. He says that for every seller (or lender) hurt by this there will be a buyer who benefits and, indeed, many families that couldn’t afford to buy an appropriate home a few years ago now find it within their means.

But the low level of housing starts is also bad news for the economy and jobs in the short term. It may be good that the excess housing inventory is being absorbed—a necessary step for

³ Normal “demographic demand” for new housing is about 1.2 million annually, the net rate of household formation. Total demand for new housing is about 1.6 million annually (the blue line on **Figure 2.6**). The difference is about 0.3 million new units needed to replace net removals of existing homes (due to demolitions and natural disasters) and 0.1 million in second home demand and demand for vacant housing units necessary in a normally operating housing market.



housing (and the forest products industry) to recover. However, the bad news is that economic growth will probably be sluggish—and unemployment elevated—until residential construction picks up.

According to Edward Leamer, UCLA Forecast Director, the slow recovery over the next couple of years may be “homeless” as well as “jobless”. He says that for strong economic growth to occur, consumers will need to express their optimism in the way that really counts—buying homes and cars. And that is not going to happen if businesses continue to express their pessimism in the way that really counts—by not hiring workers. The result is an economic Catch-22.

Snapping a string of two consecutive monthly gains, home builder confidence in the market for newly built, single-family homes fell back to February levels, where it was before the beginning of the most recent homebuyer tax credit-related surge, according to results of the latest National Association of Home Builders/Wells Fargo Housing Market Index (HMI), released on June 15. The HMI dropped five points to 17 in June. Any number under 50 indicates that more builders view home sales conditions as poor rather than good. This suggests single family starts may decline again soon.

The housing market won’t fully heal until those who have delayed forming new households during the recession and those who lost their homes to foreclosure and need to repair their credit and rebuild their savings make the transition to homeownership. That may take a while. Household formation typically stalls during a recession as people move in with family or friends,

or share rentals. In addition, young adults are less likely to leave their parental home if they are unemployed. The U.S. lost 1.2 million households from 2005 to 2008. Normal rates of household formation, around 1.2 million new households per year, won't return until the job market recovers.

Yet once again, we are reducing our housing starts forecast over the entire forecast period. The bottom remains flatter and we now expect the increase in future years to be less steep than we did previously (see **Figure 2.6**). We are now predicting only 651,000 new housing starts for 2010 rather than the 757,000 in the February Forecast.

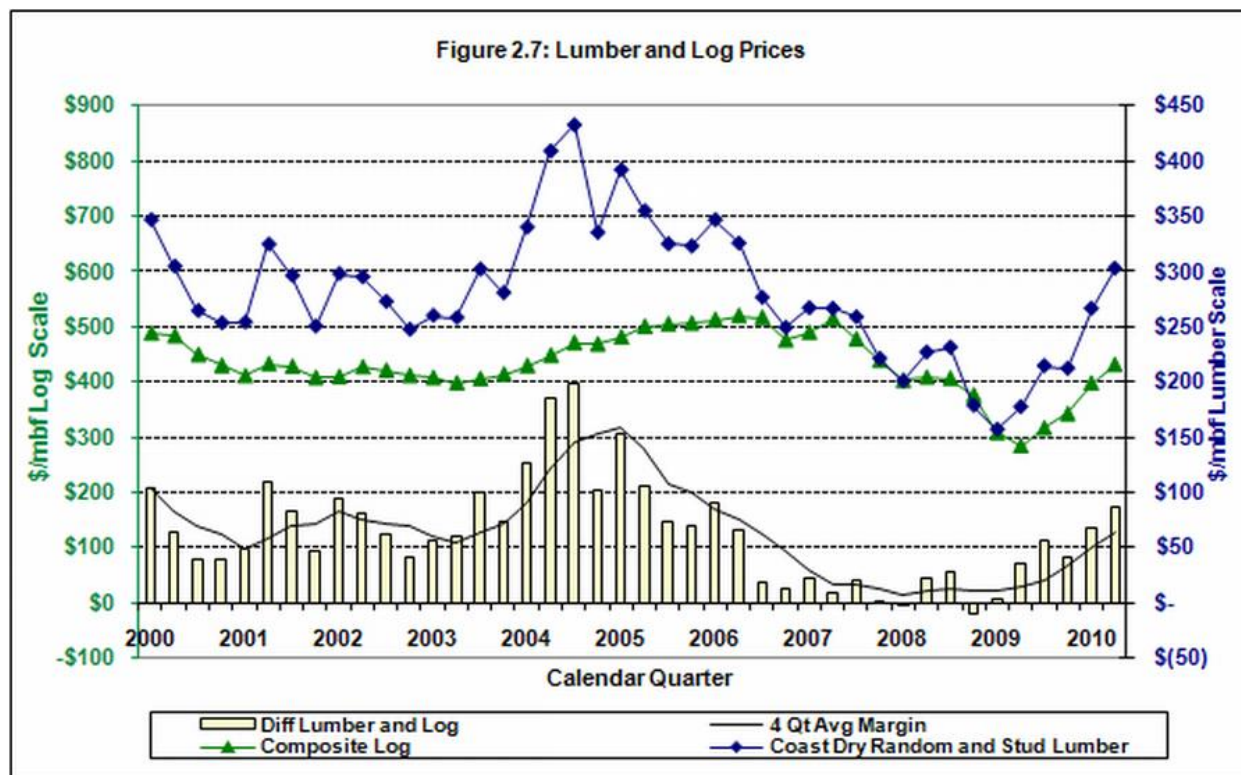
Lumber, logs, and stumpage prices

Lumber Production. Total North American softwood lumber production has averaged 64 billion board feet per year for the last fifteen years (1995-2009). The record year for lumber production was 2005 with 75 billion board feet. In 2009, total North American sawmill output was only 42 billion board feet, 34 percent off the 15-year average level of lumber production and 44 percent off the record year (2005). The percentage falloff was the same in both U.S. and Canadian sawmills.

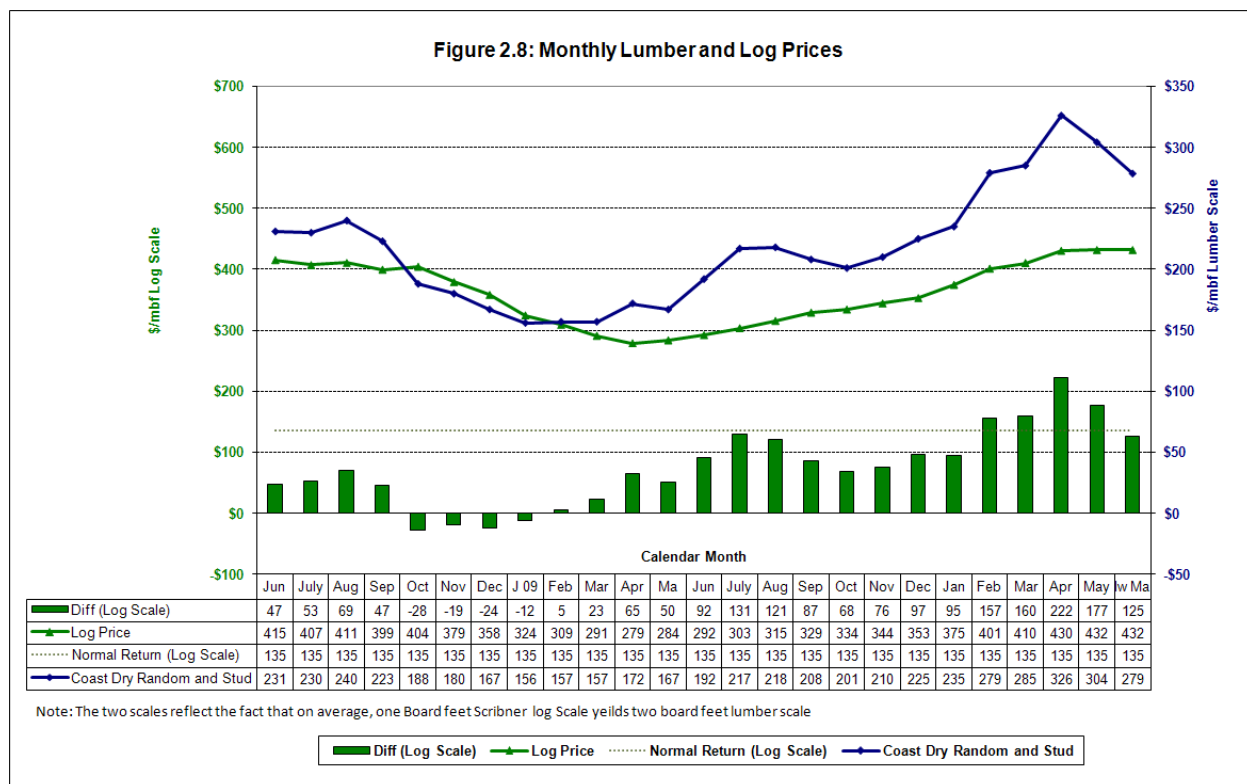
In the peak lumber production year of 2005, U.S. and Canadian sawmills together were operating at 91 percent of capacity. After the housing market crash, they were only operating at 57 percent of capacity in 2009. Closer to home, sawmills in western Washington and western Oregon (“Coast” region) were operating at 93 percent of capacity in 2005 but at only 56 percent in 2009 (and at only 45 percent in December of 2009).

RISI, the leading forest products industry information firm, predicts that U.S. and Canada lumber production won’t return to the 64 billion board feet annual level until 2013, at which time they predict that sawmills will be operating at 85 percent of capacity. But this may well be optimistic given the continued depressed state of the U.S. housing market.

Lumber and Log Prices. In the last Forecast, we discussed the unanticipated strength and run up of lumber and log prices throughout 2009 (see **Figures 2.7 and 2.8**)—surprising because of the high unemployment rate, record low new home sales and housing starts, and the very low



percentage of capacity at which sawmills were operating. It became obvious that the lumber and log prices were not being driven up by strong demand. The supporting fundamentals just were not there. Ironically, the very weak demand for lumber caused by the recession led to depletion of lumber inventories at the mill yards and throughout the entire distribution network, resulting in a very short supply. This lack of lumber in the system (from the sawmill all the way to the wholesalers and retailers), combined with a short-term reduction in supply of logs (as private landowners postponed harvest in response to low log prices as well as due to some bad weather), is what caused the temporary spike in lumber and log prices. Random Lengths' Coast Dry Random and Stud lumber composite went from \$156/mbf in January 2009 to \$235/mbf in January 2010. The composite log price went from \$279/mbf in April 2009 to \$375/mbf in January 2010.



From January through April of this year, lumber prices continued to increase dramatically (see **Figures 2.7 and 2.8**), as increased seasonal demand at the beginning of the building season combined with the extremely low lumber inventories throughout the supply chain to perpetuate the continuing short-term scarcity of lumber. Lumber peaked in April at \$326/mbf, up almost 40 percent from January and up almost 90 percent from a year earlier. Logs were up to \$430/mbf in April.

Lumber futures traded on the Chicago Merchantile Exchange that closed at \$337/mbf on April 21 dropped rapidly to \$197/mbf on June 18, a 41 percent fall in less than two months. There is no sign that lumber prices are leveling off. In response to lower lumber prices, mills have already began announcing temporary closures as lumber supply has now caught up with, and perhaps surpassed, the low level of demand.

Much has been made of lumber exports to China, especially Canadian exports. Many in the timber and lumber sectors are hopeful that Chinese lumber demand will be a savior supporting higher lumber and log prices in an otherwise depressed market. China certainly has a strong and growing thirst for commodities from all over the world. There is no doubt that Chinese demand for North American (and other) lumber is registering strong growth. Canadian lumber exports to China are up 152 percent in 1Q 2010 over 1Q 2009. However, this increased volume accounts for only 0.7 percent of North American lumber industry demand.

Timber Supply. The outlook for timber supply in the U.S. is generally positive. Volume of operable and legally harvestable timber has generally increased in all major U.S. timber producing regions during the years 2005-2009. Added to this, the down-cycle in timber demand in the current recessionary period is accelerating increases in timber inventories. Private forest landowners especially are electing to not harvest or sell timber at low stumpage prices. This supply factor is expected to be a significant factor restraining timber price increases over the next several years, at least during the years 2010-2014, as timber harvest levels remain fairly low relative to timber inventory and growth.

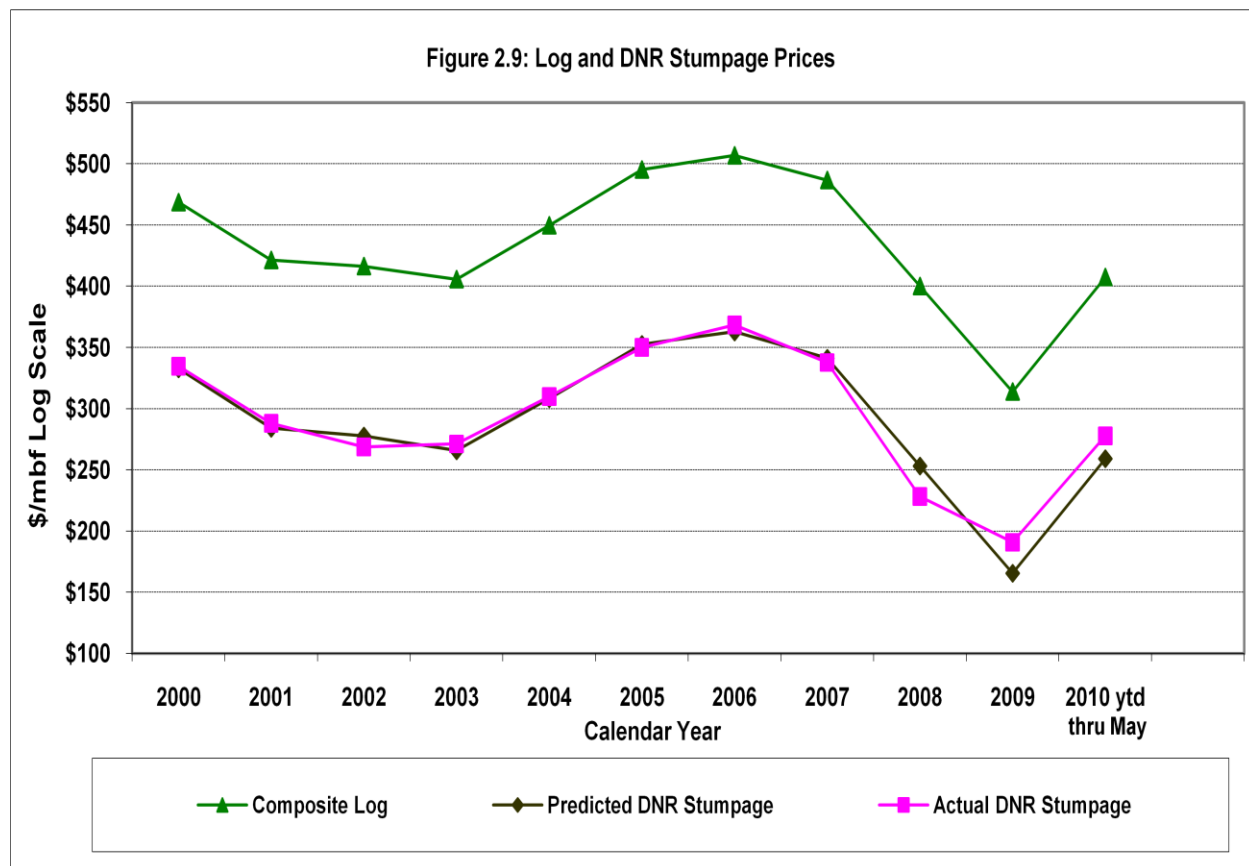
On the other hand, land conversion and regulatory restrictions will increasingly act to reduce long term timber supply. RISI predicts that 10 percent of operable timber inventory in the western U.S. will be lost to land conversion and regulatory restrictions in the next 15 years. However, if real estate markets are even slower to recover than expected, the rate of land conversion would be dampened at least in the near-term future.

A major factor which will act to reduce North American timber supply in 2014 and beyond is the devastation to the timber base in British Columbia (B.C.) resulting from the mountain pine beetle epidemic. Beetle kill of B.C. timber peaked in 2005 at 140 million cubic meters, but it will continue at the rate of 40-60 million cubic meters a year through 2013, after which it will tail off rapidly.

Log and DNR Stumpage Prices. Figure 2.9 shows prices for logs, predicted DNR stumpage, and actual DNR stumpage on an annual basis since 2000. The “composite log price” represents actual prices for logs delivered to the mill weighted by the average geographic location, species, and grade composition of timber sold in DNR timber sales. The DNR stumpage price is “predicted” by deducting \$150/mbf for the log price to account for logging, transportation, and other costs of getting the standing timber to the mill.

Both log prices and DNR timber sale prices were highest in 2006, when the composite log price was at \$507/mbf and DNR timber sales averaged \$363/mbf. The graph shows the steep fall off in prices to 2009, when logs were at \$314/mbf and stumpage was at \$166/mbf (less than half of the price just three years earlier).

The graph also shows the sharp upturn in log and timber prices in the first five months of 2010. Please note that this is a year-to-date average price only through May. It is clear that log and timber prices are now turning sharply downward. It remains to be seen where the average prices will be for the entire 2010 calendar year, but we expect them to be significantly below the five months year-to-date figure.





Part 3. DNR's Revenue Forecast

This Revenue Forecast includes Department revenues from timber sales on trust lands, leases on trust uplands, and leases on aquatic lands. It also forecasts revenues to individual funds. Some caveats about the uncertainty of forecasting Department revenues are summarized at the end of this section.

Timber Revenues

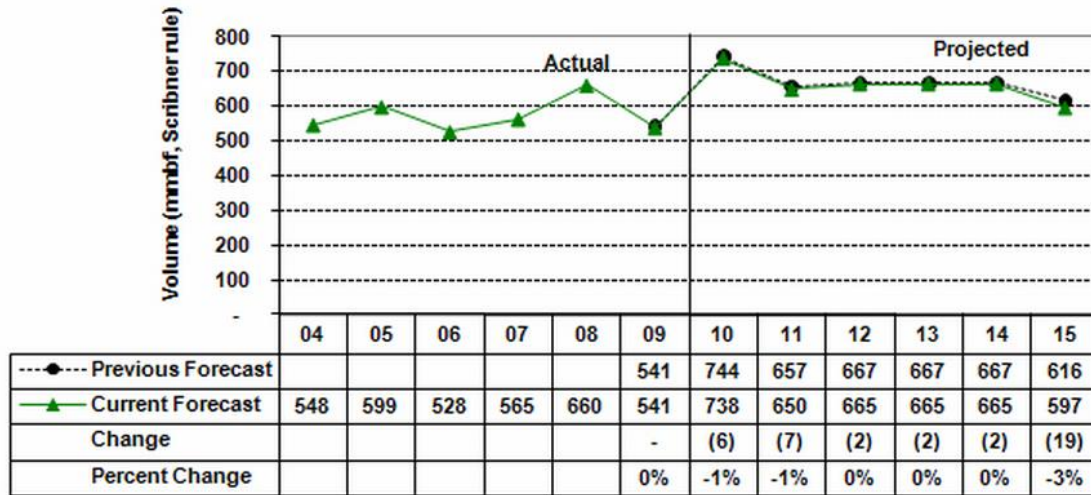
The Washington State Department of Natural Resources (DNR) sells timber through contracts. The Department determines the total volume to be offered for sale each month and the minimum bid for each sale. The sale is awarded to the highest bidder and the average sales price (\$/mbf) is set at the time of auction. DNR collects a 10 percent initial deposit at the time of sale and holds it until the sale is completed. Revenues are collected at the time of harvest (removal). The initial deposit is credited as the last 10 percent is harvested. DNR timber sale contracts sold over the last several years have varied in duration from less than three months to three-and-a-half years, with an average (weighted by volume) of about 22 months. The purchaser determines the actual time of harvest within the terms of the contract. As a result, timber revenues to beneficiaries and DNR management funds lag current market conditions.

Timber that is sold but not yet harvested is referred to as “volume under contract” or “inventory”. Timber is added to the inventory when it is sold and removed from the inventory when it is harvested.

Timber Sales Volume. In the current fiscal year through May, DNR has sold 708 mmbf or 95 percent of the volume (744 mmbf) previously forecast to be sold this year. We have changed our forecast timber sales volume for nearly completed FY 2010 to 738 mmbf based on planned June sales of 43 mmbf and an adjustment for resales totaling 13 mmbf ($708 + 43 - 13 = 738$). See **Figure 3.1**. We have also made some very minor adjustments to the timber sales volumes forecast in the years FY 2011 through FY 2015.

Timber Removal Volume. For each Forecast, we survey DNR timber sale purchasers to determine their planned timing of removals from the timber volume they have under contract at the time of the survey.

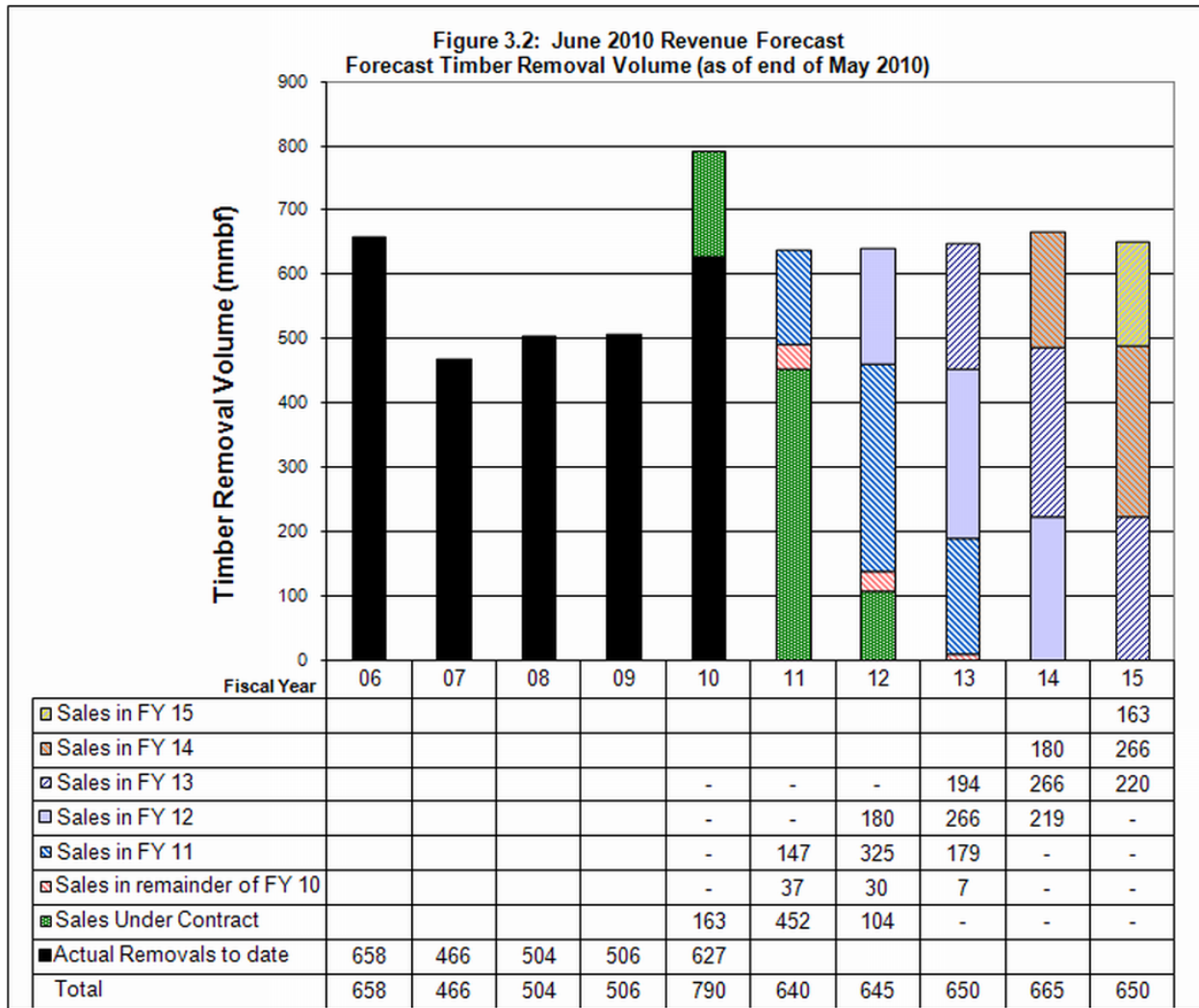
Figure 3.1: Forecast Sales Volume



Fiscal year ending June 30

The latest survey, conducted in the first week of May, indicates that purchasers once again accelerated their harvest plans, likely because of the recent run up in delivered log prices. The Department currently has 720 mmbf valued at \$170.8 million under contract. Purchasers plan to harvest 163 mmbf, 23 percent of the volume under contract, this fiscal year (FY 2010), 452 mmbf (63 percent) next fiscal year, and the remaining 104 mmbf (14 percent) next biennium (2011-13) (see **Figure 3.2** for detail).

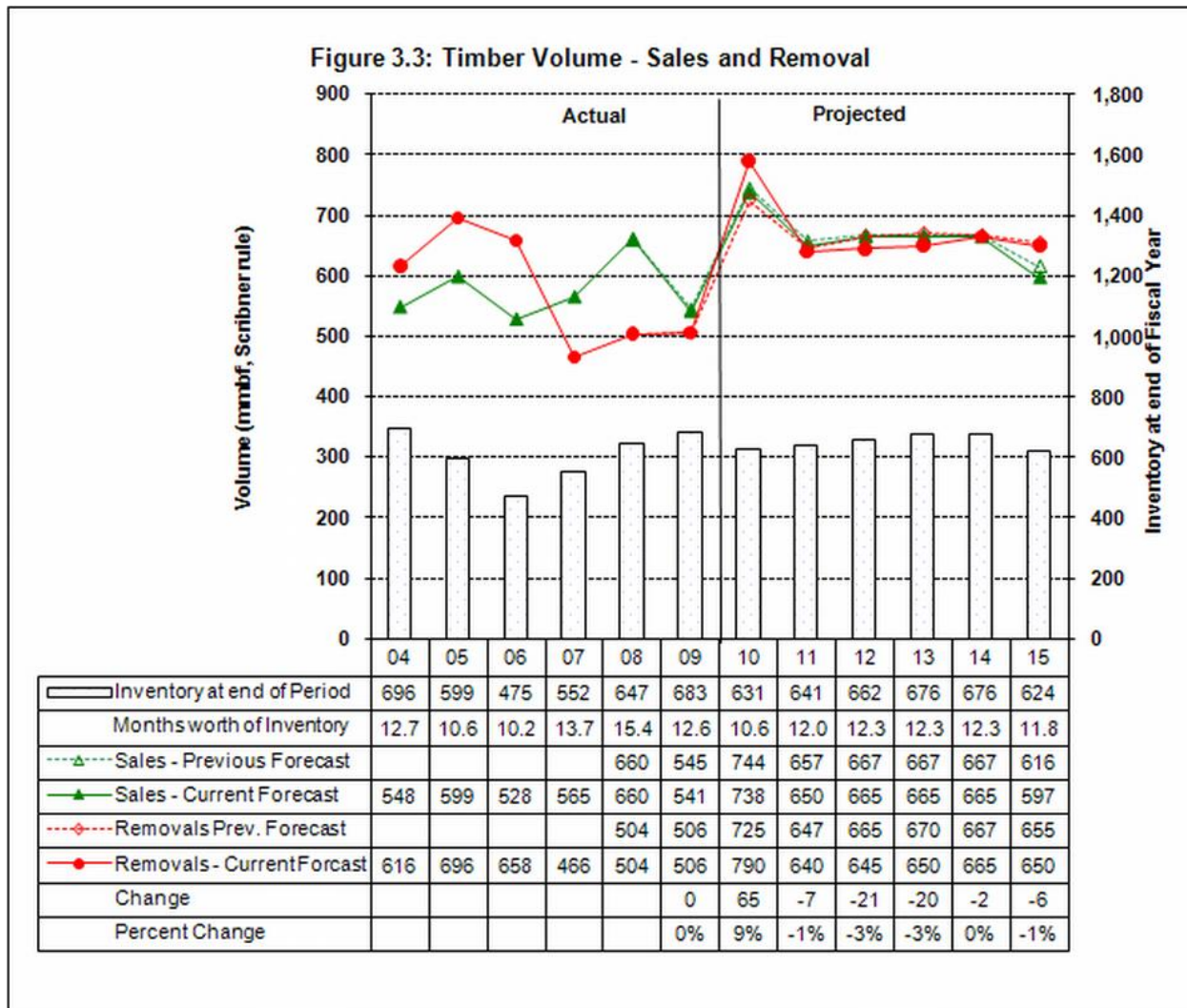
Through April (the first ten months of FY 2010), purchasers removed 627 mmbf. Together with the expected removals of 163 mmbf from volume under contract, this brings our forecast of total removals for FY 2010 to 790 mmbf. This is an increase of 65 mmbf, or 9 percent, from what we previously forecast for FY 2010.



Removals in FY 2010 and Beyond. Removals generally follow sales but not always. For the ten-year period from FY 1997 through FY 2006, removals were greater than sales in seven of the ten years and the volume under contract fell by more than half, from 1 billion board feet to just over 475 million board feet. During the FY 2004-2006 period, removals averaged 17 percent more than the sales level for those three years (see **Figure 3.3**). Also during that period, the volume under contract decreased from 696 mmbf to 475 mmbf, and the months' worth of inventory at the current harvest rate fell to just 10.2 months.

From FY 2007 to FY 2009, things turned around and removals were about 17 percent less than sales for that three-year period. During this period, the volume under contract grew from 475 mmbf to 693 mmbf and the months' worth of inventory increased from 10.2 to 12.6 months

Generally, we anticipate that the DNR timber purchasers will draw down the volume under contract during periods of increasing prices and add to the volume under contract when prices are falling.

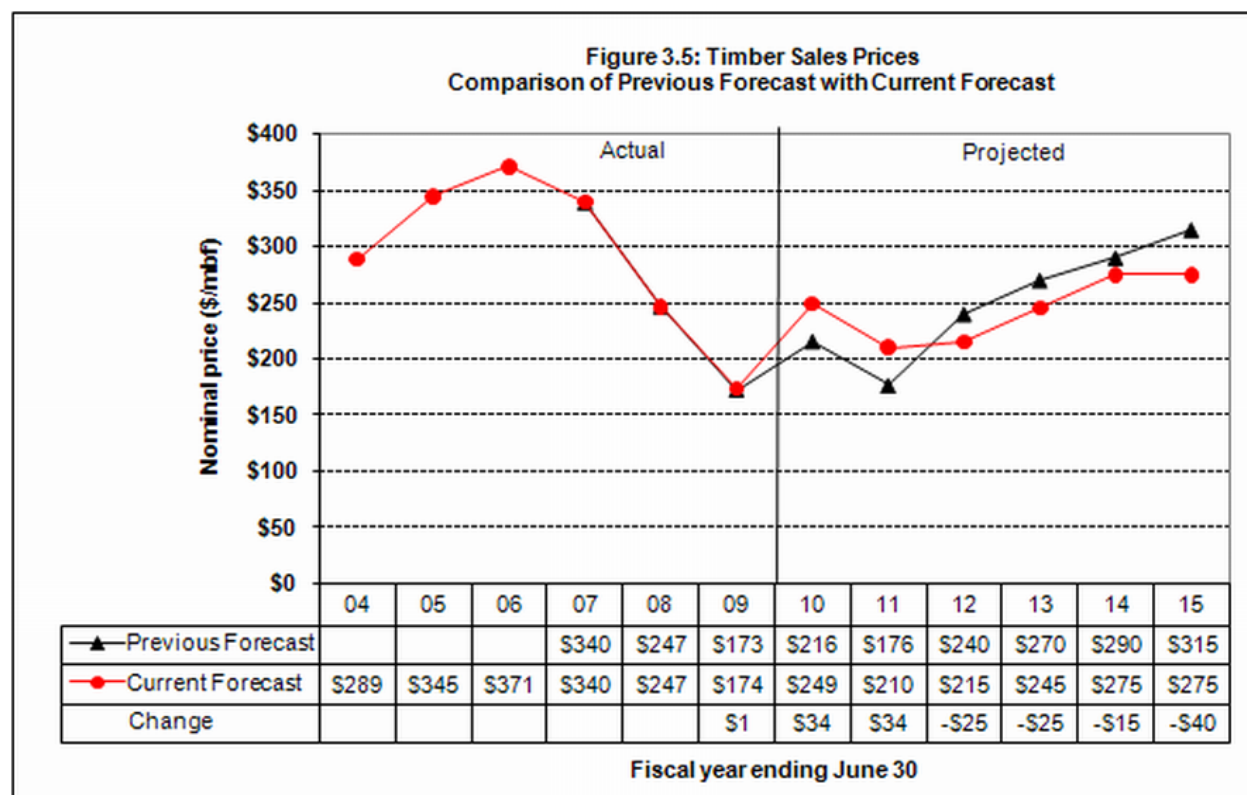
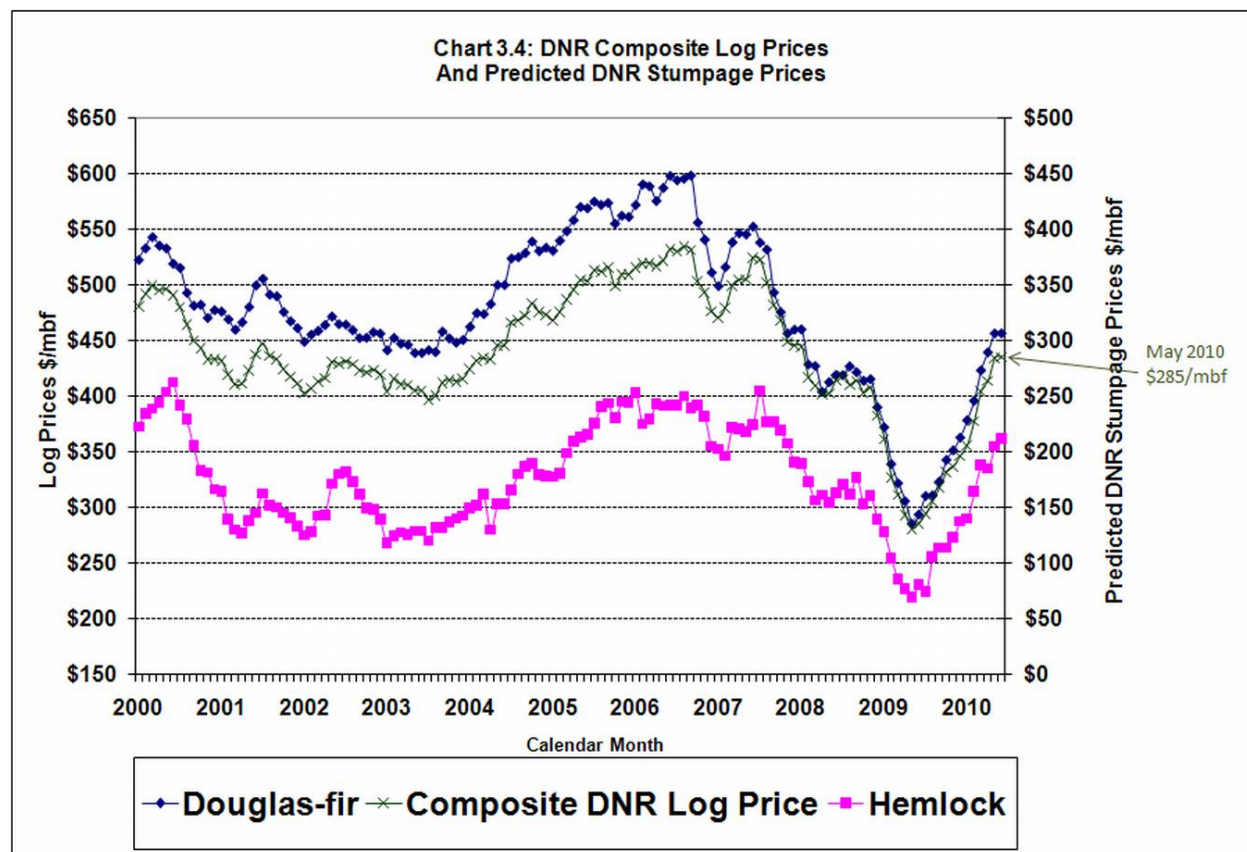


Going forward, even though we are forecasting prices to increase somewhat, we project that removals will be more or less equal to sales through 2014 (see **Figure 3.3** for details).

Timber Sales Prices. When we did the February Forecast, our composite stumpage price had increased to \$225/mbf. In the three months ending in April it increased an additional 27 percent to \$284/mbf (see **Figure 3.4**). In May the composite stumpage prices was basically unchanged at \$285/mbf.

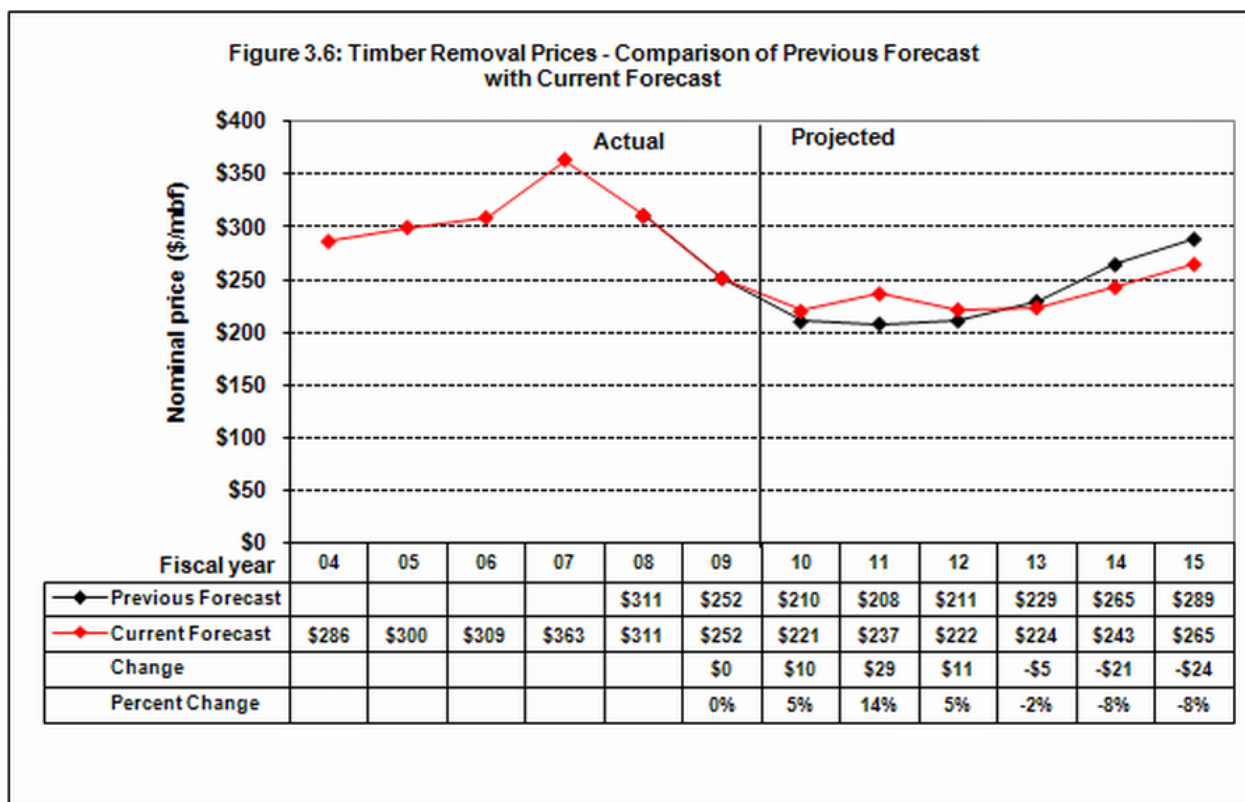
With only one month to go in FY 2010, we now forecast DNR timber stumpage prices to average \$249/mbf for the full year—up \$34/mbf (or 16 percent) from the February Forecast (see **Figure 3.5**).

Lumber prices have fallen to the point that they are now putting downward pressure on log and timber stumpage prices. Given that current downward pressure from lumber prices, we now expect stumpage prices to average \$210/mbf for FY 2011, down \$39/mbf from FY2010 but up \$34/mbf from that forecast in February (see **Figure 3.5**).



As mentioned above, we have become increasingly pessimistic about the long-term recovery of the U.S. housing market and therefore predict lower demand for forest products and lower DNR stumpage prices for FYs 2012 through 2015 (see **Figure 3.5**). We now are forecasting stumpage prices for next biennium will average \$230/mbf; that's about equal to this biennium, but down about \$25/mbf or 10 percent from what we forecast in February.

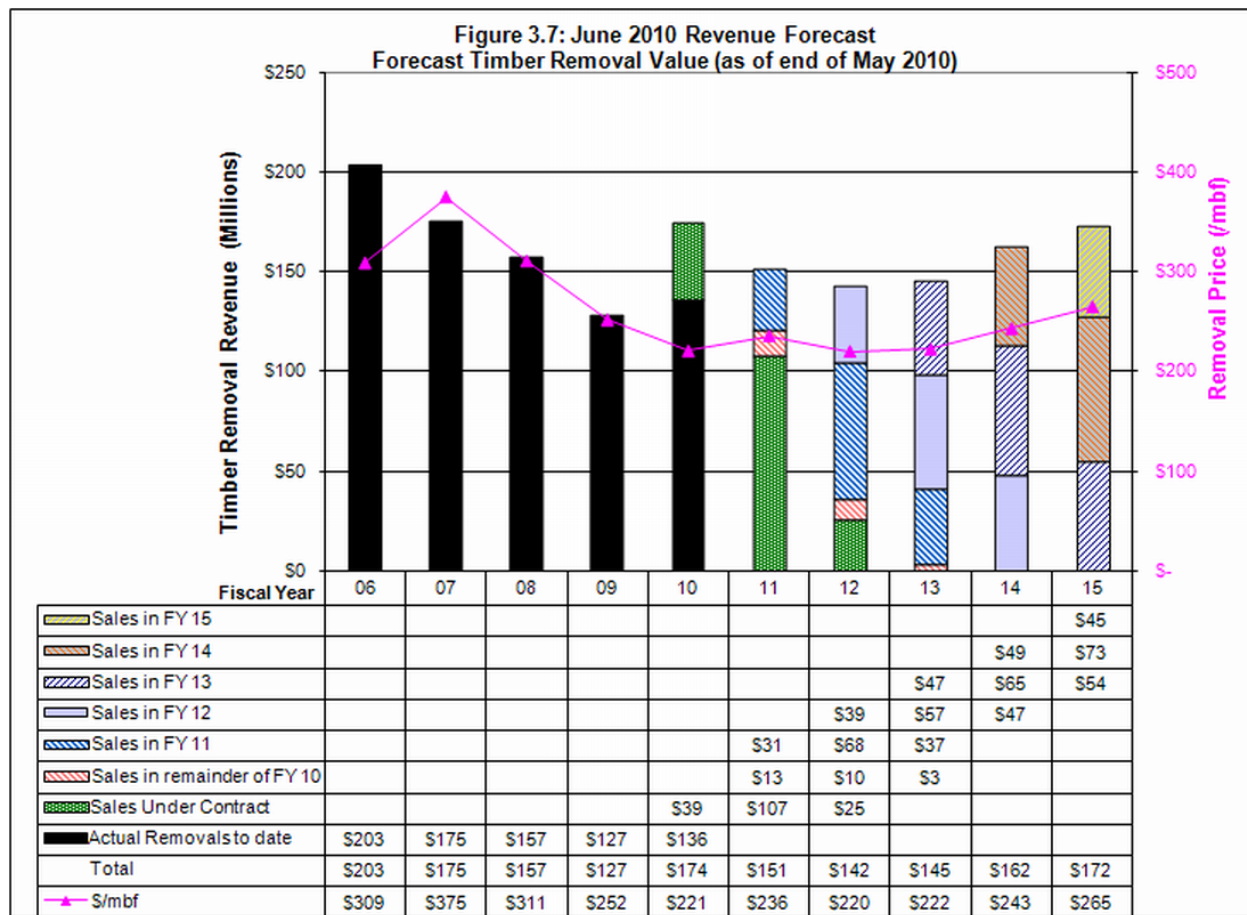
Timber Removal Prices. Timber removal prices are a function of timber sales prices and removal timing. They can be thought of as a moving average of previous sales prices, weighted by the volume of sold timber removed from each previous sales period. The removal volumes used to calculate the weights are shown in **Figure 3.2**, which results in a smoothing out and a lag of removal prices compared to sales prices. For example, sales prices bottomed out at \$173/mbf in FY 2009 (see **Figure 3.5**). As shown in **Figure 3.6**, removal prices are forecasted to bottom out one year later in FY 2010 at \$221/mbf, \$48/mbf higher than the bottom for sales prices.



We are changing our forecast of timber removal prices to show a significant increase in next fiscal year 2011 from \$208/mbf up to \$237/mbf, a 14 percent increase from February's Forecast due to the higher than anticipated timber sales prices in FY 2010. Forecast average removal prices in FY 2012 are up \$11/mbf, or 5 percent, also reflecting the higher FY 2010 timber sales prices. Offsetting decreases in predicted timber removal prices are now forecast for FYs 2013 through 2015 (see **Figure 3.6**).

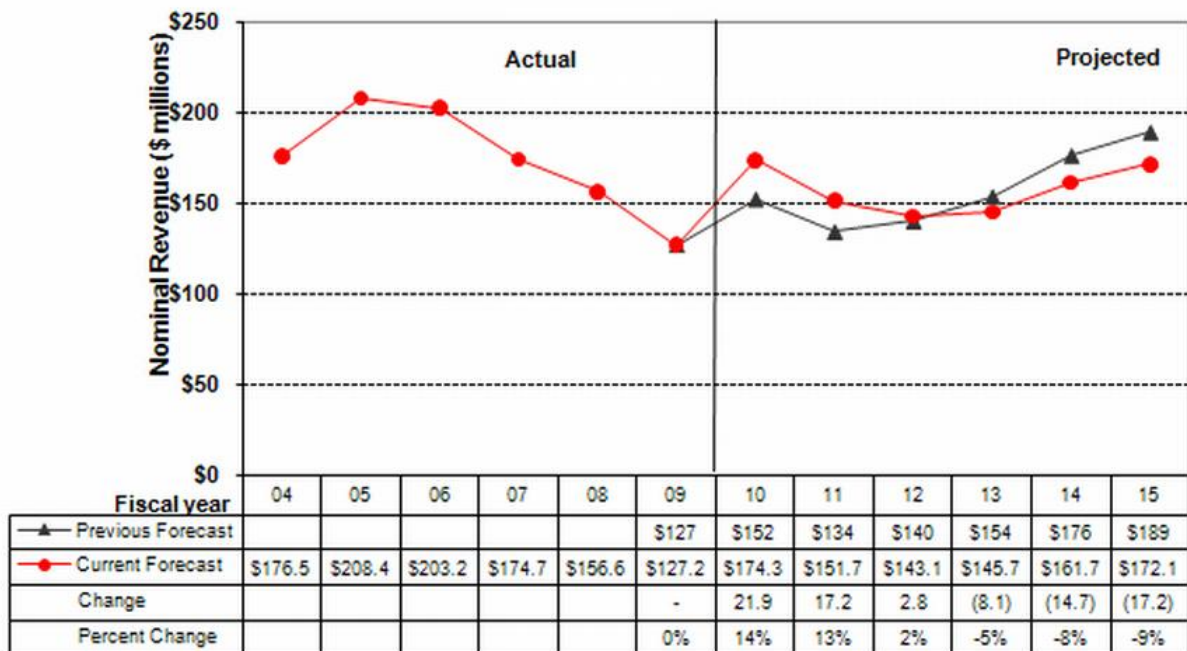
Timber Removal Revenues. **Figure 3.7** shows removal revenues by the fiscal year the timber was sold ('under contract' is already sold as of May 2010) and the average removal price for that fiscal year. Over 86 percent of the forecast timber harvest value this biennium (FY 2010

and FY 2011) will come from the volume sold before or under contract as of the end of May, four percent of the harvest value is forecast to come from timber sales sold in the remainder of this year (FY 2010), and the remaining 10 percent will come from timber sales sold in FY 2011.



Forecast timber revenues are up by \$21.9 million (14 percent) in FY 2010 and \$17.2 million (13 percent) in FY 2011. In the 2011-13 Biennium, forecast revenues are down by \$5.3 million, or 2 percent. See **Figure 3.8** for detail. In the 2013-15 Biennium, we are revising our forecast of timber removal revenues downward by \$31.9 million, or 9.6 percent.

Figure 3.8: Timber Removal Revenues - Comparison of Previous Forecast with Current Forecast, 2000-2013



Upland lease revenues

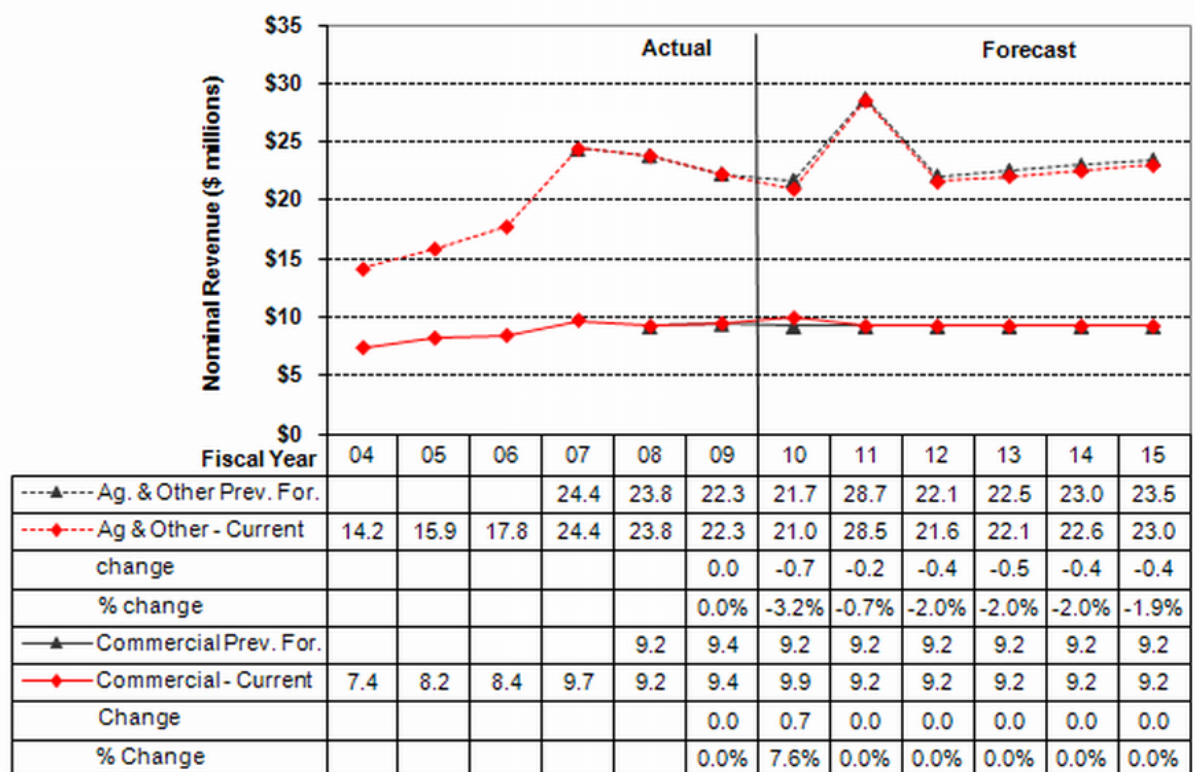
Upland lease revenues are generated primarily from leases and the sale of valuable materials, other than timber, on state trust lands. In this Forecast, upland lease revenues are divided into two categories:

- 1) **Commercial**—Commercial real estate leases.
- 2) **Agricultural and Other**—Agricultural, special use, mineral and hydrocarbon, right-of-way, communication site, and special forest products leases, and sale of other valuable materials.

Commercial. Through three quarters of FY 2010, actual collections of commercial lease revenue were \$568,000, or 8 percent more than forecast. Based on this and on actual revenues for April and May, we are revising our FY 2010 forecast for commercial lease revenue up by 8 percent to \$9.9 million (see **Figure 3.9**). The commercial lease revenues increased because of rent adjustments on some of the leases.

The current economic slowdown has increased the probability that some of DNR's commercial building lessees could vacate and default. Because of this, we are leaving our forecast for future

Figure 3.9: Upland Lease Revenue - Comparison of Previous Forecast with Current Forecast, 2000-2013



years unchanged and we believe the risk of downside adjustment to our current forecast is probably greater than the upside risk at least in the next two to three years.

Agricultural and Other. Through three quarters of FY 2010, actual revenue collections on agricultural and other leases were about \$1,890,000 less than what was forecast in February. Contributing factors are cyclically low prices for wheat, apples, and cherries, deferral of Department wheat sales into the fourth quarter, a one-time rent credit to a lessee for capital improvements on trust land, and lower than expected sand, gravel, and rock revenues due to the slowdown in the construction sector caused by the recession. Accordingly, we are adjusting our FY 2010 forecast for agricultural and other uplands lease revenue downward by \$700,000, or 3 percent.

For future years, the forecast is also being reduced downward by \$200,000/year in FYs 2011-2015 due to lower projected revenues in the mineral, oil and gas, and rock, sand, and gravel category⁴ and by an additional \$200,000/year in FYs 2012-2015 due to the increased uncertainty of completing the Ice Harbor land transaction which would have resulted in this amount of increased agricultural lease revenues.

As described in the September 2009 Forecast, revenues in FY 2011 in agricultural and other upland leases are expected to spike an estimated \$7 million higher than otherwise because of the one-time sale of communication site facilities (DNR will sell the communication site improvements to a master lessee but retain ownership of the underlying land asset). See details in **Figure 3.9**.

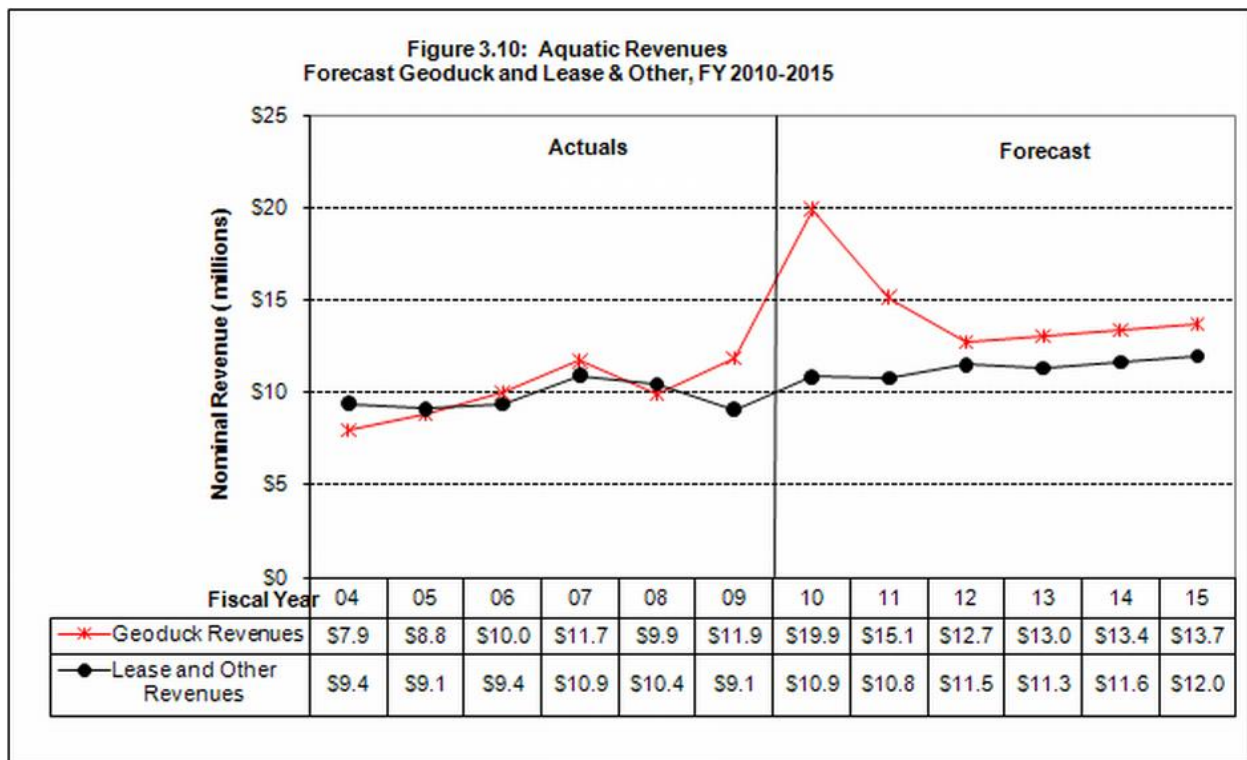
⁴ As we are going to print on this Forecast, DNR received notice that a lessee will surrender oil and gas exploration leases which would have yielded about \$600,000 in revenue in FY 2011. We will be evaluating this information and incorporating it into the September Forecast.

Aquatic revenues

Geoduck Revenues. Since the February Forecast, the Department had yet another extremely successful geoduck auction, averaging over \$10.58/lb., which is well over twice the baseline forecast level of \$4.50 per pound. Based on the four extraordinarily successful geoduck auctions in FY 2010 (at \$9.15, \$8.71, \$10.61, and \$10.58 per pound, respectively), we are revising our forecast for nearly-completed FY 2010 up to \$19.9 million, 21 percent higher than the \$16.4 million predicted previously. The forecast average price per pound for FY 2010 is now \$9.22.

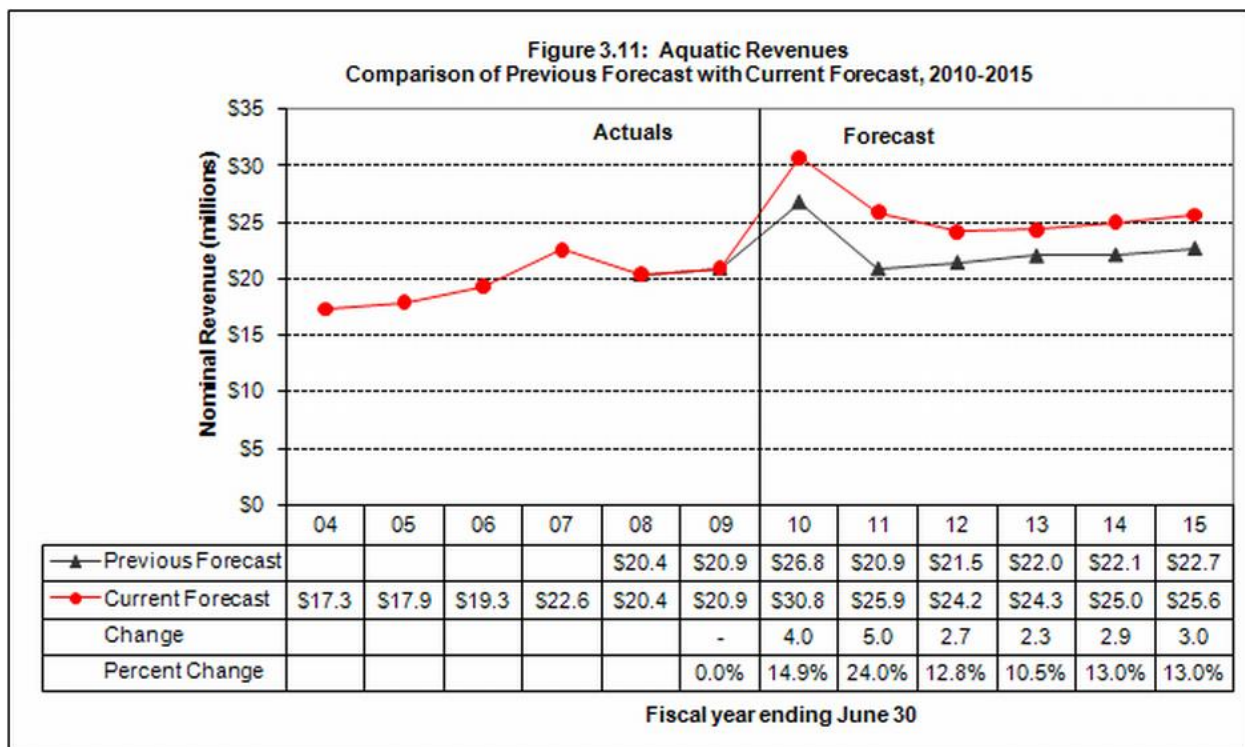
Geoduck prices are highly volatile and may well return to more historically normal levels at some point. But to a significant extent, the geoduck harvest price is influenced by economic prosperity in China (the predominant end market) and we foresee no immediate reversal in China's strong economic growth and well-being.

DNR held a geoduck auction in May 2010 with an average price of \$10.55, supporting the price level of the four previous FY 2010 auctions. The revenues from the May auction will be received in FY 2011, the fiscal year in which the geoducks will be harvested. Based on the continued higher-than-forecast geoduck prices, we are changing our forecast of geoduck revenues in FY 2011 and beyond. The new revised baseline unit price is \$5.75 per pound. The new forecast price for FY 2011, which will include the proceeds of the May 2010 sale, is \$7.02 per pound.



A wild card in geoduck harvest revenues is PSP, or paralytic shellfish poisoning. If geoduck beds are closed to harvest because of an unpredictable occurrence of this toxin, the harvest opportunity and therefore revenues could be deferred or lost.

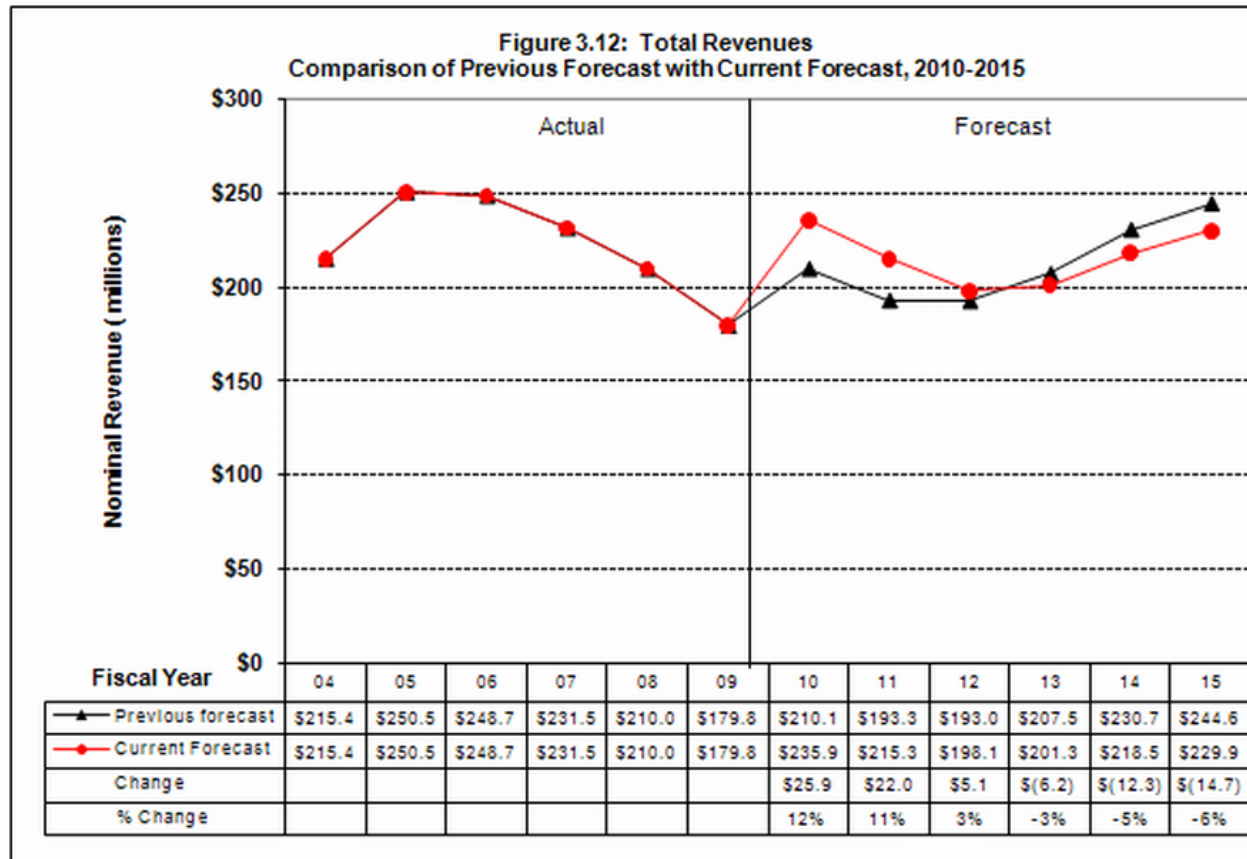
Lease and Other Revenues. Lease and other aquatic revenues (other than geoduck) year-to-date through the first three quarters of FY 2010 are \$617,000, or 7 percent above the February forecast. This increase is almost entirely attributable to unanticipated revenues from the settlement with Taylor Shellfish for unauthorized use of state aquatic lands. Payments of roughly \$500,000 each will be made in FYs 2010, 2011, 2012 and they are included in the revised forecast.



The net result is an increase in forecast revenues from aquatic lands by \$4.0 million in FY 2010, \$5.0 million in FY 2011, and \$2.3-\$3.0 annually in FYs 2012-2015 (see **Figure 3.11** for detail).

Total revenues from all sources

Revenues during the 2009-11 Biennium are up from the previous Forecast by \$47.9 million, or 11.9 percent (see **Figure 3.12**). This is due almost entirely to increased timber removal revenues—up \$39.1 million (see **Figure 3.8**)—and increased geoduck revenues—up \$8.9 million. A \$0.9 million reduction in agricultural and other uplands lease revenue offsets a \$0.7 million increase in commercial leasing revenue and a \$0.1 million increase in other aquatic lands revenues.



Revenues during the 2011-13 Biennium are down from the previous Forecast by \$0.9 million, or 0.2 percent (see **Figure 3.12**). This reduction is the result of a \$5.3 million decrease in projected timber removal revenues (which was primarily a shift out of the 2011-13 Biennium and into the current biennium) and a \$4.2 million increase in non-timber revenues (driven by a \$5.0 million increase in aquatic lands revenues).

Current forecast revenues for the 2013-15 Biennium are down \$26.9 million, or 6 percent, from the previous Forecast. This is mostly attributable to timber removal revenue being adjusted downward by \$31.9 million due to lower timber sales prices than previously predicted. All uplands leasing revenue is adjusted downward by \$0.9 million while aquatic lands revenue is revised upward by \$4.9 million.

Some caveats

A very wise man named Yogi Berra once said “the future ain’t what it used to be”. Economic forecasters know exactly what he means.

*Sandra Pianalto, President and CEO, Federal Reserve Bank of Cleveland
May 18, 2010*

DNR strives to produce the most accurate and objective forecast possible, based on the Department’s current policy directions and available information. Actual revenues will depend on future policy decisions made by the Legislature and the Department, as well as market and other conditions beyond DNR’s control. Listed below are issues that could potentially have a significant impact on future revenues from DNR-managed lands:

- **U.S. and Global Economic and Financial Crisis.** The U.S. is still recovering from the largest and longest recession since the Great Depression. The effects of the burst real estate bubble and the collapse of the financial system in the U.S. crossed over into the larger economy and other countries’ economies. There is currently an unusually high degree of volatility in economic and financial systems. Forecasting in uncertain times is even more difficult than usual. We are not forecasting a “double dip” recession but, in its current weakened state, the probability of a new financial or geopolitical shock nudging the economy back into recession is elevated.
- **U.S. Housing Market.** It has been over four years since the housing downturn began. Housing starts hit a 50-year low point last year. New home sales hit an all-time low in May. Housing data remains discouraging and we have reduced our housing starts forecast yet once again and even that may be too optimistic. It is possible that the housing recovery will be pushed back even further by a slower-than-expected economic recovery and an oversupply of existing and new homes. This would likely result in lower timber sales prices than we currently forecast.
- **Timber Sales Volume.** The Department is on a path to sell 738 mmbf in regular timber sales in FY 2010. We forecast 650 mmbf in DNR timber sales in FY 2011 and then 665 mmbf annually for FYs 2012 through 2014. There is some risk that DNR will not be able to sustain this level of timber sales because of administrative challenges and litigation over the marbled murrelet and other environmental issues.

At this point we judge the downside and upside risks to our forecast to be about balanced. Naturally, we worry more about the downside risks.

These and other future circumstances could have a great impact on future Department revenues. As events and market conditions develop, DNR will incorporate new information into future Forecast updates.

Distribution of revenues

The distribution of timber revenues by grant are based on:

- The value of timber in the inventory (sales sold but not yet harvested);
- Planned sales for the remainder of FY 2010 through FY 2012 based on planned sales volumes;
- The distribution of the sustainable harvest for FY 2013 through FY 2015.

Timber sales are expected to be harvested on average between 10.6 and 12.3 months after they are sold. (See **Figure 3.3** for details.) Distributions of lease revenues are assumed to be proportional to historic distributions unless otherwise specified.

Since a single timber sale can be worth over \$3 million, dropping, adding, or delaying even one sale can represent a significant shift in revenues to a specific trust fund.

Management Fee Deduction. The budget passed by the Legislature extended the 30 percent RMCA deduction through the end of the 2009-11 Biennium. The RMCA deduction is assumed to return to 25 percent in FY 2012. The forecast RMCA revenues at the 30 percent deduction for FY 2012 and beyond are shown at the top of **Table 3.2**.

Revenue forecast tables

Tables 3.1 and 3.2 on the following pages provide Forecast details. **Table 3.1** focuses on the source of revenues, and **Table 3.2** focuses on the distribution of revenues. Both tables include historical and projected figures.

Table 3.1 June 2010 Forecast by Source (In millions of dollars)								
Change from February 2010 Forecast								
Timber Sales	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
Volume (mmbf)	660	541	738	650	665	665	665	597
Change	-	-	(6)	(7)	(2)	(2)	(2)	(19)
% Change	0%	0%	-1%	-1%	0%	0%	0%	-3%
Price (\$/mbf)	\$247	\$174	\$249	\$210	\$215	\$245	\$275	\$275
Change	\$0	\$1	\$34	\$25	-\$25	-\$25	-\$15	-\$40
% Change	0%	1%	16%	14%	-10%	-9%	-5%	-13%
Value of Timber Sales (In millions of dollars)	\$ 163.0	\$ 94.0	\$ 184.1	\$ 136.5	\$ 143.0	\$ 162.9	\$ 182.9	\$ 164.3
Change	\$ -	\$ -	\$ 23.6	\$ 15.0	\$ (17.1)	\$ (17.2)	\$ (10.6)	\$ (29.9)
% Change	0%	0%	15%	12%	-11%	-10%	-5%	-15%
Timber Removals	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
Volume (mmbf)	504	506	790	640	645	650	665	650
Change	-	-	65	(6)	(20)	(20)	(2)	(6)
% Change	0%	0%	9%	-1%	-3%	-3%	0%	-1%
Price (\$/mbf)	\$311	\$252	\$221	\$237	\$222	\$224	\$243	\$265
Change	\$0	\$0	\$10	\$29	\$11	-\$5	-\$21	-\$24
% Change	0%	0%	5%	14%	5%	-2%	-8%	-8%
Timber Revenue (In millions of dollars)	\$ 156.6	\$ 127.2	\$ 174.3	\$ 151.7	\$ 143.1	\$ 145.7	\$ 161.7	\$ 172.1
Change	\$ -	\$ -	\$ 21.9	\$ 17.2	\$ 2.8	\$ (8.1)	\$ (14.7)	\$ (17.2)
% Change	0%	0%	14%	13%	2%	-5%	-8%	-9%
Lease Revenue	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
Agricultural and Mineral	\$ 23.8	\$ 22.3	\$ 21.0	\$ 28.5	\$ 21.6	\$ 22.1	\$ 22.6	\$ 23.0
Change	\$ -	\$ -	\$ (0.7)	\$ (0.2)	\$ (0.4)	\$ (0.5)	\$ (0.4)	\$ (0.4)
% Change	0%	0%	-3%	-1%	-2%	-2%	-2%	-2%
Commercial	\$ 9.2	\$ 9.4	\$ 9.9	\$ 9.2	\$ 9.2	\$ 9.2	\$ 9.2	\$ 9.2
Change	\$ -	\$ -	\$ 0.7	\$ -	\$ -	\$ -	\$ -	\$ -
% Change	0%	0%	8%	0%	0%	0%	0%	0%
Aquatic Revenue	\$ 20.4	\$ 20.9	\$ 30.8	\$ 25.9	\$ 24.2	\$ 24.3	\$ 25.0	\$ 25.6
Change	\$ -	\$ -	\$ 4.0	\$ 5.0	\$ 2.7	\$ 2.3	\$ 2.9	\$ 3.0
% Change	0%	0%	15%	24%	13%	10%	13%	13%
Total Lease Revenue	\$ 53.4	\$ 52.6	\$ 61.7	\$ 63.6	\$ 55.0	\$ 55.6	\$ 56.8	\$ 57.9
Change	\$ -	\$ -	\$ 4.0	\$ 4.8	\$ 2.3	\$ 1.9	\$ 2.4	\$ 2.5
% Change	0%	0%	7%	8%	4%	3%	4%	5%
Total All Sources	\$ 210.0	\$ 179.8	\$ 235.9	\$ 215.3	\$ 198.1	\$ 201.3	\$ 218.5	\$ 229.9
Change	\$ -	\$ -	\$ 25.9	\$ 22.0	\$ 5.1	\$ (6.2)	\$ (12.26)	\$ (14.69)
% Change	0%	0%	12%	11%	3%	-3%	-5%	-6%
Note: Trust land transfer is not included in distribution revenues.								
This table excludes interest and Land Bank transactions, fire assessments, permits, and fees.								
Totals may not add due to rounding.								

Table 3.2: June 2010 Forecast by Fund (In millions of dollars)

Change from February 2010 Forecast 30% RMCA thru FY 11								
				RMCA AT 30%====> \$ 30.4 \$ 31.6 \$ 34.4 \$ 35.3				
Management Funds	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
041 RMCA - Upland	\$ 32.0	\$ 26.5	\$ 31.0	\$ 31.7	\$ 25.3	\$ 26.3	\$ 28.7	\$ 29.4
Change	\$ -	\$ -	\$ 2.5	\$ 3.2	\$ 0.2	\$ (1.4)	\$ (2.4)	\$ (2.9)
% Change	0%	0%	9%	11%	1%	-5%	-8%	-9%
041 RMCA - Aquatic	\$ 8.6	\$ 8.9	\$ 13.7	\$ 11.4	\$ 10.4	\$ 10.4	\$ 10.7	\$ 11.0
Change	\$ -	\$ -	\$ 1.9	\$ 2.6	\$ 1.4	\$ 1.2	\$ 1.4	\$ 1.5
% Change	0%	0%	16%	29%	15%	12%	16%	15%
014 FDA	\$ 18.6	\$ 17.3	\$ 24.9	\$ 21.8	\$ 18.4	\$ 18.2	\$ 20.0	\$ 22.6
Change	\$ -	\$ -	\$ 3.2	\$ 1.8	\$ 0.4	\$ (0.7)	\$ (1.4)	\$ (1.6)
% Change	0%	0%	15%	9%	2%	-4%	-6%	-6%
Total Management Funds	\$ 59.2	\$ 52.7	\$ 69.6	\$ 64.9	\$ 54.1	\$ 55.0	\$ 59.4	\$ 63.0
Change	\$ -	\$ -	\$ 7.7	\$ 7.6	\$ 2.0	\$ (1.0)	\$ (2.3)	\$ (3.0)
% Change	0%	0%	12%	13%	4%	-2%	-4%	-4%
Current Funds	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
113 Common School Construction	\$ 56.6	\$ 41.5	\$ 47.2	\$ 51.1	\$ 54.7	\$ 55.8	\$ 60.6	\$ 61.5
Change	\$ -	\$ -	\$ 2.1	\$ 3.5	\$ 0.2	\$ (3.0)	\$ (5.2)	\$ (6.1)
% Change	0%	0%	5%	7%	0%	-5%	-8%	-9%
999 Forest Board Counties	\$ 52.5	\$ 48.6	\$ 65.6	\$ 54.8	\$ 48.4	\$ 47.1	\$ 51.9	\$ 56.6
Change	\$ -	\$ -	\$ 7.9	\$ 4.3	\$ 1.4	\$ (1.9)	\$ (3.6)	\$ (4.0)
% Change	0%	0%	14%	9%	3%	-4%	-7%	-7%
001 General Fund	\$ 3.0	\$ 1.4	\$ 4.2	\$ 3.8	\$ 2.8	\$ 2.5	\$ 2.7	\$ 3.1
Change	\$ -	\$ -	\$ 1.0	\$ 0.1	\$ 0.0	\$ (0.1)	\$ (0.2)	\$ (0.2)
% Change	0%	0%	29%	3%	1%	-4%	-5%	-6%
348 University Bond Retirement	\$ 2.3	\$ 3.4	\$ 2.0	\$ 0.8	\$ 0.9	\$ 1.5	\$ 1.6	\$ 2.0
Change	\$ -	\$ -	\$ 0.2	\$ 0.1	\$ 0.0	\$ (0.1)	\$ (0.1)	\$ (0.2)
% Change	0%	0%	12%	14%	0%	-4%	-7%	-8%
347 WSU Bond Retirement	\$ 1.2	\$ 1.6	\$ 1.1	\$ 1.2	\$ 1.2	\$ 1.2	\$ 1.2	\$ 1.3
Change	\$ -	\$ -	\$ (0.0)	\$ (0.0)	\$ (0.0)	\$ (0.0)	\$ (0.0)	\$ (0.0)
% Change	0%	0%	-3%	-1%	-2%	-2%	-2%	-2%
042 CEP&RI	\$ 3.8	\$ 3.8	\$ 5.0	\$ 6.5	\$ 5.2	\$ 5.3	\$ 5.7	\$ 6.4
Change	\$ -	\$ -	\$ 0.9	\$ 1.8	\$ 0.4	\$ (0.4)	\$ (0.6)	\$ (0.8)
% Change	0%	0%	23%	37%	9%	-7%	-9%	-11%
036 Capitol Building Construction	\$ 5.2	\$ 5.7	\$ 8.6	\$ 7.3	\$ 6.4	\$ 6.7	\$ 7.4	\$ 7.5
Change	\$ -	\$ -	\$ 1.0	\$ 1.1	\$ (0.0)	\$ (0.3)	\$ (0.6)	\$ (0.6)
% Change	0%	0%	14%	18%	-1%	-4%	-7%	-8%
061/3 Normal (CWU, EWU, WWU, TESC)	\$ 0.1	\$ 0.1	\$ 0.1	\$ 0.1	\$ 0.1	\$ 0.1	\$ 0.1	\$ 0.1
Change	\$ -	\$ -	\$ (0.0)	\$ (0.0)	\$ (0.0)	\$ (0.0)	\$ (0.0)	\$ (0.0)
% Change	0%	0%	-3%	-1%	-2%	-2%	-2%	-2%
Other Funds	\$ 0.2	\$ 0.4	\$ 0.1	\$ 0.0	\$ 0.0	\$ 0.3	\$ 0.3	\$ 0.4
Change	\$ -	\$ -	\$ (0.0)	\$ 0.0	\$ 0.0	\$ (0.0)	\$ (0.0)	\$ (0.0)
% Change	0%	0%	-2%	1%	48%	-1%	-2%	-6%
Total Current Funds	\$ 125.0	\$ 106.5	\$ 133.8	\$ 125.5	\$ 119.8	\$ 120.5	\$ 131.6	\$ 138.9
Change	\$ -	\$ -	\$ 13.1	\$ 10.9	\$ 2.0	\$ (5.8)	\$ (10.3)	\$ (12.0)
% Change	0%	0%	11%	9%	2%	-5%	-7%	-8%

Table 3.2(Continued): June 2010 Forecast by Fund (In millions of dollars)

Change from February 2010 Forecast 30% RMCA thru FY 11								
Aquatic lands Enhancement Account	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
02R	\$ 11.7	\$ 12.0	\$ 17.0	\$ 14.5	\$ 13.8	\$ 13.9	\$ 14.3	\$ 14.6
Change	\$ -	\$ -	\$ 2.1	\$ 2.4	\$ 1.4	\$ 1.2	\$ 1.4	\$ 1.5
% Change	0%	0%	14%	20%	11%	9%	11%	11%
Permanent Funds								
	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
601 Agricultural College Permanent	\$ 4.3	\$ 2.9	\$ 6.0	\$ 2.5	\$ 2.6	\$ 3.1	\$ 3.5	\$ 3.5
Change	\$ -	\$ -	\$ 1.1	\$ 0.1	\$ (0.2)	\$ (0.2)	\$ (0.4)	\$ (0.3)
% Change	0%	0%	23%	3%	-8%	-5%	-9%	-9%
604 Normal School Permanent	\$ 3.1	\$ 2.5	\$ 3.8	\$ 2.5	\$ 2.7	\$ 2.3	\$ 2.5	\$ 2.6
Change	\$ -	\$ -	\$ 0.6	\$ (0.2)	\$ 0.2	\$ (0.2)	\$ (0.2)	\$ (0.3)
% Change	0%	0%	20%	-6%	6%	-6%	-8%	-9%
605 Common School Permanent	\$ 0.2	\$ 0.3	\$ 0.4	\$ 0.5	\$ 0.4	\$ 0.4	\$ 0.4	\$ 0.4
Change	\$ -	\$ -	\$ (0.0)	\$ (0.0)	\$ (0.0)	\$ (0.0)	\$ (0.0)	\$ (0.0)
% Change	0%	0%	-3%	-1%	-2%	-2%	-2%	-2%
606 Scientific Permanent	\$ 6.0	\$ 2.8	\$ 5.1	\$ 4.4	\$ 4.2	\$ 5.7	\$ 6.4	\$ 6.6
Change	\$ -	\$ -	\$ 1.3	\$ 1.2	\$ (0.2)	\$ (0.2)	\$ (0.5)	\$ (0.6)
% Change	0%	0%	33%	37%	-5%	-4%	-7%	-8%
607 University Permanent	\$ 0.5	\$ 0.1	\$ 0.2	\$ 0.4	\$ 0.4	\$ 0.4	\$ 0.4	\$ 0.3
Change	\$ -	\$ -	\$ 0.0	\$ (0.0)	\$ 0.0	\$ (0.0)	\$ (0.0)	\$ (0.0)
% Change	0%	0%	18%	-2%	12%	-4%	-9%	-6%
Total Permanent Funds	\$ 14.1	\$ 8.6	\$ 15.5	\$ 10.4	\$ 10.4	\$ 11.9	\$ 13.2	\$ 13.4
Change	\$ -	\$ -	\$ 3.0	\$ 1.1	\$ (0.3)	\$ (0.6)	\$ (1.1)	\$ (1.2)
% Change	0%	0%	24%	12%	-2%	-4%	-8%	-8%
Total All Funds	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
Total	\$ 210.0	\$ 179.8	\$ 235.9	\$ 215.3	\$ 198.1	\$ 201.3	\$ 218.5	\$ 229.9
Change	\$ -	\$ -	\$ 25.9	\$ 22.0	\$ 5.1	\$ (6.2)	\$ (12.3)	\$ (14.7)
% Change	0%	0%	12%	11%	3%	-3%	-5%	-6%
Note: Trust land transfer is not included in distribution revenues.								
This table excludes interest and Land Bank transactions, fire assessments, permits, and fees.								
Totals may not add due to rounding.								